

DETERMINING POTENTIAL PREDICTIVE FACTORS OF PUBLIC AND PRIVATE  
UNIVERSITY TYPES FROM NATIONAL SCIENCE FOUNDATION FUNDING.

by

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## **B) Abstract**

This research sought to investigate the predictive characteristics of the National Science Foundation (NSF) funding for private versus public institutions over the past decade. A variety of characteristics were considered for differentiating private and public institutions for NSF grant funding that might be used as predictors for potential future funding. The characteristics included fiscal year, name of institution, type of institution, total Research Support award amount and award number, the state in which the institution is located, Overall Ranking, Research Ranking, Innovation Ranking, the total number of US-based NSF funded publications per year, and the total number of US-based NSF funded publications for the top author in each institution. Publicly available data was used for the range of 2010-2019, and the data were analyzed using standard statistical methods that included histograms, singular, and multiple linear regression. The multiple regression analysis of the data showed that there were significant indicators as predictors of private and public universities for NSF funding.

## **C) Preface**

### **Acknowledgments**

This thesis is dedicated to the memory of Joshua Rettig, my friend.

A life cut short much too soon.

His friendship, encouragement, and support helped bring me through my thesis.

Thanks goes also to my professor, Dr. Jeffrey Edwin Kantor, for all his help, guidance, and  
patience to get me through my thesis.

He made me strive for excellence and perfection.

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## **G) Introduction**

### **What are Private and Public Institutions?**

Public institutions, according to Law Insider, include any federal, state, county, or municipal institution (Law Insider, n.d.). According to the United National Educational, Scientific, and Cultural Organization (UNESCO) Institute for Statistics, Private institutions are defined as “independent entities owned by a non-State entity, such as a firm, business enterprise or individual” (UNESCO, 2020). One of the most significant differences between the types of institutions is that government funding is more important in public than private institutions (Epigem, n.d.). Public institutions are typically more closely monitored by governmental bodies and can more easily become pawns in political disputes, whereas private institutions have a greater dependence on fundraising and relationships with alumni and major donors.

### **What is NSF?**

The National Science Foundation (NSF) is one of the leading United States federal funding agencies that provide funding to a variety of scientific fields and research. The NSF is an independent federal agency created by Congress in 1950 to promote the progress of science; to advance the national health and prosperity, and to secure the national defense system (NSF–Where Discoveries Begin, n.d.). The NSF helps to support basic research to create knowledge that transforms the future. This support helps to drive the US, economy; enhance the nation’s security; and advance knowledge to sustain global leadership. In 2020, NSF received a budget of \$8.3 billion and is the funding source for 25% of all federally supported basic research conducted by America’s colleges and

universities. In many research fields such as mathematics, computer science and, the social sciences, NSF is the major source of federal backing. NSF's leadership has two major components: (1) an NSF-based management director responsible for program creation and administration, merit review, planning, budget and day-to-day operations, and (2) a 24-member National Science Board of eminent individuals that meets six times a year to establish the overall policies of the foundation. The director and all board members serve six-year terms. Each board member, along with the NSF deputy director, is appointed by the President of the United States and confirmed by the U.S. Senate. Presently, NSF has a total workforce of around 2,100 at its Alexandria, Virginia, headquarters. This includes approximately 1,400 career employees, 200 scientists from research institutions on temporary duty, 450 contract workers, and the staff of the NSB office and the Office of the Inspector General. NSF is the only federal agency whose mission includes support for all fields of fundamental science and engineering, except for the medical sciences. The NSF is tasked with keeping the United States at the leading edge of discovery in areas from astronomy to geology to zoology. In all cases, NSF aims to ensure that its funded research is fully integrated with education so that today's revolutionary work will also be training tomorrow's top scientists and engineers. NSF operates from the "bottom up," and keeps close track of research around the United States and the world, maintaining constant contact with the research community to identify ever-moving horizons of inquiry, monitoring those areas most likely to result in progress, and choosing the most promising people to conduct the research.

For the NSF, the fiscal year 2019 budget appropriations by account total \$8 billion (NSF funding and supporting, n.d.), and the breakdown is as follows. 81% of the funding comes from Research And Related Activities (RARA), equating to \$6 billion. 11% came from Education and Human Resources (HER) at \$922 million. 4% came from Agency Operations and Award Management (AOAM)



at \$333 million. 4% came from Major Research Equipment and Facilities Construction (MREFC) at \$296 million. Less than 1% came from the Office of the Inspector General (OIG) at \$15 million, and less than 1% from the National Science Board (NSB) at \$4 million.

In terms of institutions that are funded by NSF, the fiscal year 2019 obligations for Research and Education Programs distributed \$7,798 million in funds. 78% of the funds went to Colleges, Universities, and Academic Consortia, around \$6,079 million. 13% went to the industry (which included small businesses and non-profit organizations), around \$998 million. 4% went to Federally funded Research and Development Centers, around \$308 million, and 5% went to “other”, which included federal, state, and local governments, as well as international organizations, totaling around \$412 million. From the \$7,798 million of the 2019 fiscal year obligations for Research and Education Programs, there is a breakdown on the NSF award mechanisms: 73% from grants, around \$5,655 million; 22% from Cooperative Agreements, around \$1,686 million; and 6% from Contracts, around \$457 million. From the number of NSF Competitive Proposals, New Awards, and Funding Rates, Competitive Proposals started at 49,635 in 2015 and trended downward to 41,033 by 2019. New awards also saw a downward trend from 12,016 in FY 2015 to 11,252 in FY 2019; the main stabilizing factor was the funding rate percentage which in contrast saw an overall upward trend from 2015 at 24%, which went down a percentage in FY 2017 at 23% but then climbed to a funding rate of 27% by 2019.

In terms of how funding is spent, NSF & NCSES conducted a Survey of Federal Funds for R&D in FY 2017. A series of percentages were generated for NSF support of Academic Basic Research in Selected fields (as a percentage of total federal support):

87% for Computer Science, 67% for Biology, 67% for Social and Psychological Sciences, 67% for Mathematics, 64% for Environmental Sciences, 46% for Engineering; 45% for Physical Sciences, and 25% for All Science and Engineering Fields. This thesis seeks to determine whether any institutional characteristics could serve as predictors for universities or institutions that receive NSF grant funding is either public or private, based on the findings from the literature review. The data used potential predictors including total SF Research Funding per year; the overall rankings, research rankings, and innovation rankings of universities; US-based NSF funded publications totals per institution, and the number of publications a top author or PI of a university can generate in a given year. These predictors can help determine any significant types of patterns to institutions as to whether they are private or public institutions, and by looking at the past decade's NSF data we can get a sense of previous funding to each university and also determine the predictors that are the most significant in predicting private and public schools.

### **G) Review of the Literature**

From the U.S. Department of Education Office of Educational Research and Improvement, the National Center for Education Statistics provided distinctions between public and private schools, and what are their different sources of funding support. Public schools depend primarily on local, state, and federal government funds, while private schools are usually supported by tuition payments and sometimes by funds from other nonpublic sources such as religious organizations, endowments, grants, and charitable donations (NCES, 1997). In some states, private schools receive public funds for certain services (e.g., transportation), and tuition in private schools can vary greatly by grade level and whether the school has a religious affiliation.

In terms of public higher education, the federal government has attempted to implement various forms of performance-based budgeting in the late 1960s and early 1970s (Layzell et al, 1999). As Sizer, Spee, and Bormans discussed, (Sizer et al, 1992) there are five primary uses for performance indicators: 1) Monitoring: promoting the ongoing assessment of a program, institution or system; 2) Evaluation: enabling the measurement of the attainment of goals and objectives; 3) Dialogue: providing a concrete basis for communicating with others about abstract policy concepts and goals; 4) Rationalization: promoting a rational and coherent policymaking process; 5) Resource allocation: providing a rational basis for the allocation of resources. Layzell discussed several options for institutions that wish to develop their performance indicators, but mainly keeping things simple, and each state should have enough control and influence to ensure that its schools and institutions reflect that state's particular needs and concerns. For two US private institutions, the Howard Hughes Medical Institute and James S. McDonnell Foundation, grant renewal is extremely crucial. For the Howard Hughes Medical Institute Investigator Program (HIP, n.d.) investigators often can receive renewal funding for five additional years after an evaluation of the first period. The strength of HIP lies in its ability to fund long-term research and to explore research questions that are difficult to address in two- or three-year projects. It is interesting then to note the differences between the HIP and the James S. McDonnell Foundation: 21<sup>st</sup> Century Science Initiative (MSI) (JSMF, n.d.). The MSI was created to invest in the acquisition of new knowledge and in the responsible application of knowledge for solving real-world problems. Investigators are encouraged to submit early, including preliminary data and stages of development, and aim to break new ground or to challenge commonly held assumptions. Applications should be sufficiently novel, cross-disciplinary, or heterodox as to render them unlikely

candidates for funding from other agencies. MSI encourages work that explores new research territory with novel questions that address underlying assumptions about outgoing research in the field.

A primary indicator of research university success is the annual federally sponsored sciences and engineering research expenditures (Rousea et al, 2018). The number is useful as an indicator of the cumulative research activity funded by federal funding agencies. Expenditure data is a better indicator than awards because it reflects one year of direct and indirect billing activity to a federal research grant, and is a more generalized means to determine the scale of the institutional investment that is required to sustain research activities.

### **NSF Budget Internet Information System**

The NSF has a variety of funding opportunities for a multitude of scientific fields that are made easily accessible by searching for an organization alphabetically (NSF funding opportunities, n.d.). The NSF Budget Internet Information System is an NSF federal government computer program with an online search application that uses “session variables” to obtain information on NSF proposals and award statistics at various levels of detail and differing “cuts” of data. No personally identifiable information is collected, and no information is retained by the NSF after the session is complete. The data for Award Summary: by State/Institution shows the number of awards and the amount of funding by state and types of institutions receiving an NSF award. The institutions are grouped into: Federal or Government agencies, Industries that are large corporations or businesses, small businesses, and universities which are Academic Institutions of higher education regardless of accreditation status and offer at least two years of college-level studies in

residence. In the dataset, a specific state can be selected to view a list of its awarded institutions, a specific institution can be selected to view the list of awards, and in turn, to view the abstract and other project information. Ten years of funding data is available and can be limited by NSF divisions. Additional data sets include Award Summaries by Top Institutions, Summary Proposal and Award Information (Funding Rate) by State and Organization, NSF Requests and Appropriations History which includes the complete history of NSF Budget Requests and Appropriations, from 1951 through the present, and NSF Funding History by Account and FY.

### **What is HERD?**

NSF uses the Higher Education Research and Development Survey (HERD) for posting information about R&D expenditures at U.S. colleges and universities. The survey collects information on R&D expenditures by field of research and source of funds and also gathers information on the types of research, expenses, and headcounts of R&D personnel (HERD, n.d.). The survey itself acts as an annual census of institutions that expended at least \$150,000 in separately accounted for R&D in a particular fiscal year. The HERD has the authority to perform data collection on US institutions that expend more than \$150,000 in R&D annually at the end of each previous academic fiscal year, which occurs from 1 July to 30 June. The data collection is solicited under the authority of the NSF Act of 1950, as amended, and the COMPETES Reauthorization Act of 2010. The survey is sponsored by the National Center for Science and Engineering Statistics (NCSES) within NSF.

In 2010, the HERD Survey replaced a previous annual collection, the NSF Survey of Research and Development Expenditures at Universities and Colleges (Academic R&D Expenditures Survey), which was conducted from Fiscal Year 1972 through 2009. The

key variables for the Survey include the following: R&D expenditures by field and the source of funds (i.e., federal government, state and local government, business, nonprofit, institutional, and other expenses); R&D expenditures funded from foreign sources; R&D expenditures within medical schools; clinical trial expenditures (Phases I-III); R&D expenditures by type of R&D (i.e., basic research, applied research, and experimental development); Total and federally funded R&D expenditures either passed through to sub-recipients or received as a sub-recipient; federally funded R&D expenditures by field and federal agency; R&D expenditures by cost categories (e.g., salaries, software, equipment, indirect costs); total and federally funded R&D equipment expenditures by field; headcount of R&D principal investigators and all other R&D personnel; and institutional characteristics (i.e., the highest degree granted, historically black college or university (HBCU), high Hispanic enrollment (HHE), public or private control; geographic location within the United States).

For the survey, the target for using the data would include public and private nonprofit postsecondary institutions in the United States, Guam, Puerto Rico, and the U.S. Virgin Islands that (1) granted a bachelor's degree or higher in any field, (2) expended at least \$150,000 in separately accounted for R&D in the specific Fiscal Year, and (3) were geographically separate campuses headed by a president, chancellor, or equivalent. For the data collection, respondents could choose to respond to the survey by printing a questionnaire from the web and submitting a paper survey or using the web-based data collection system. For both methods, telephone and e-mail follow-ups were used. For processing the data, respondents were contacted and asked to resolve any possible self-reporting issues they experienced. Questionnaires would be carefully examined by survey staff upon receipt, and reviews focused on unexplained missing data and explanations provided for changes in reporting patterns.

If any additional explanations or data revisions were needed, respondents were sent personalized e-mail messages asking them to provide any necessary revisions before the final processing and tabulation of data. For comparing the data, the review for consistency between each year's data and submissions in prior years would reveal discrepancies; it may be necessary to modify prior years' data. This would be likely to affect trends for certain institutions that fail to report every year because current-year data are used to impute prior-year data. Individuals wishing to analyze trends other than those in the most recent data tables are encouraged to contact the Project Officer for more information about the comparability of data over time.

The purpose of this thesis is to determine if there are institutional characteristics predictive of whether the university or institution receiving NSF grant funding is public or private. The thesis will look at the annual NSF Research Support expenditures from 2010-2019 to determine whether there is any significant difference in funding levels among private and public institutions, as the expenditure data is a good way to look at annual funds and what was spent on a smaller scale per year instead of a larger per award or project amount. From the review of the literature, there are a few options available for additional predictive indicators. In terms of publications, the Scopus database helps to protect the integrity of the scholarly record by combating predatory publishing, makes the research workflow more efficient and effective; empower institutions to bolster performance, rank, and reputation; enable funders to optimize their investments (Scopus, n.d.). Scopus helps to identify emerging trends in research: What are the latest research areas? Who are the leading experts? Are you uncovering the full breadth of cutting-edge research? Scopus has comprehensive scientific data and literature, and analytical tools to keep individuals up to date and ahead of the competition. Scopus helps to enhance visibility and discovery of research and allows researchers to claim their work, ensuring proper accreditation and support career development.

Scopus is a useful tool as it provides a centralized database and location for publications. Scopus offers a multitude of search options that can be freely toggled and selected for a more specific search through the advanced search option, starting with the name of the institution, and including access type, either open access or other; year; author name; subject area; document type; publication stage; source title; keyword; affiliation; funding sponsor; country/territory; source/type; and language. This large variety of options gives an individual nearly limitless control on what factors are requested to search. Scopus does require a subscription to access the search feature but can be easily bypassed and accessed through an institution account and email address. Additional search options can provide full abstracts of publications, or a list of published works by the institution either per year or per individual author. Another set of potential indicators is from Scimago, which provides a useful set of ranking methods for institutions (Scimago, n.d.). Institutions can be ranked by a composite indicator that combines three different sets of indicators based on research performance, innovation outputs, and societal impact measured by their web visibility. Institutions can be grouped by the countries to which they belong, and sometimes are marked with asterisk consist of a group of sub-institutions, identified by the abbreviated name of the parent institution. They also can be grouped by sectors such as Universities, Health, Government, etc. For the rankings, the calculation is generated each year from the results obtained over five years ending two years before the edition of the ranking. The inclusion criterion is that institutions need to have published at least 100 publications or works included in the SCOPUS database during the last year of the selected period. In terms of the specific score indicators, the research factors that are taken into account are the output, or total number of documents published in scholarly journals indexed in Scopus; not own journals output is the number of documents not published in own journals (published by the institutions); own journals, the numbers of journals published by the institution;



international collaboration efforts and output with foreign institutions; high quality publications are the number of papers published in the most influential scholarly journals of the world within quarter 1 of the assessed year; excellence indicates the amount of an institutions scientific output that is included in the top 10% of the most cited papers in their respective scientific fields; scientific leadership is the amount of an institution's output as main contributor or the amount of papers in which the corresponding author belongs to the institution; open access is the percentage of documents published in Open Access journals; scientific talent pool is the total number of different authors from an institution in the total publication output of the institution. For the innovation factor, it is calculated through the following data categories: innovative knowledge which is scientific publication output from an institution cited in patents; technological impact is the percentage of scientific publication output cited in patents, and the number of patent applications. These datasets provide potential predictive indicators for public and private funding.

### **Predictive Characteristics**

There are a variety of characteristics that can be considered for acting as predictors differentiating between private and public institutions. After surveying the data, potential characteristics that might predict whether or not an institution receiving NSF funding was either private or public included: the fiscal year (the specific year of funding gained by the institution, chosen for a comparison of institution data); the name of the institution (for identification of the data); the total NSF Research Support award funding per year and # of awards per year (a potential indicator of private or public institutions); the state where the institution is located (for identification); the type of research institution, either R1 or R2; the Scimago ranking of the overall, research, and innovation

percentiles of each institution (gathered as potential predictors for private and public funding); and the Scopus publication data of the number of papers per year (US) that were generated directly in response to NSF awards (gathered as potential predictors for private and public funding).

### **H) Problem Statement**

The purpose of this thesis is to determine if there are institutional characteristics predictive of whether the university or institution receiving NSF grant funding is public or private.

### **I) Methodology**

The overall list of private and public institutions was determined using the NSF HERD (Higher Education Research and Development Survey). On average, there were between 200-300 public institutions and 400-600 private institutions posted per year. The public institutions were separated from the private institutions, and with the use of a random number generator, a random selection of 50 private and 50 public institutions was selected. The NSF Budget Internet Information Survey was used to search for awards by state/institution. The Award Summary by state/institution dataset was selected, and states were selected. The data was pulled from fiscal years 2010 to 2019.

The next phase of the data analysis was determining the characteristics and indicators that would be examined to predict private and public institutions receiving NSF funding. Based on the literature review, the following characteristics were used: the

fiscal year; the name of the institutions. private or public institutions (marked as 1 for public and 2 for private); total NSF Research Support award funding and numbers per year, the type of institution (either R1 or R2); the scimago ranking of the overall, research, and innovation percentiles of each institution; Scopus data showing the # of papers published per year from the US generated directly in response to NSF awards, and the # of papers per top author per US institution for NSF awards each year.

The scimago website was utilized to select the following factors: universities; United States; either overall, research, or innovation ranking, and the individual year from between 2010 and 2019. From the list that was generated, each university was located, and its overall, research and innovation ranking was logged on the dataset included in the appendices section.

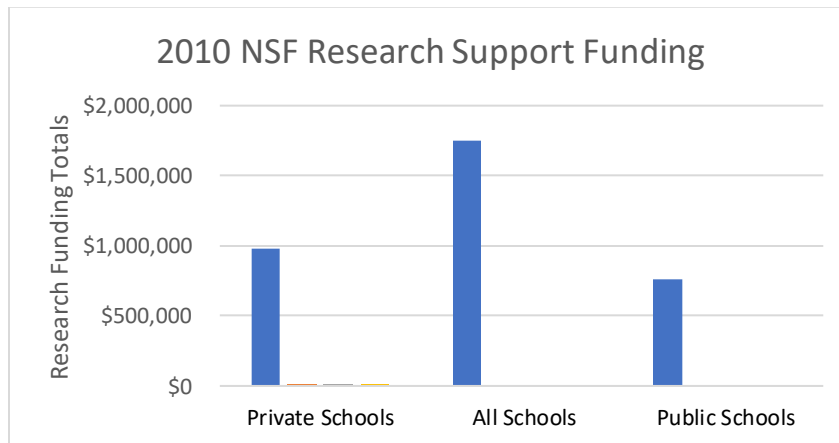
The Scopus advanced search option, the following limits were put into place: the name of the institution, the year selected individually each search beginning with 2010 and the last search was 2019, the funding sponsor of NSF was selected, along with the Country/Territory of the United States. The number of total publications per year was gathered per institution, along with the number of publications produced by the top author of the institution per year.

The data analysis stage included generating histograms, multiple linear regressions, and singular linear regressions. Two histograms were generated per year from 2010-2019. Linear regression was used to assess the strength of relationships between the predictive characteristics and public/private status of institutions.

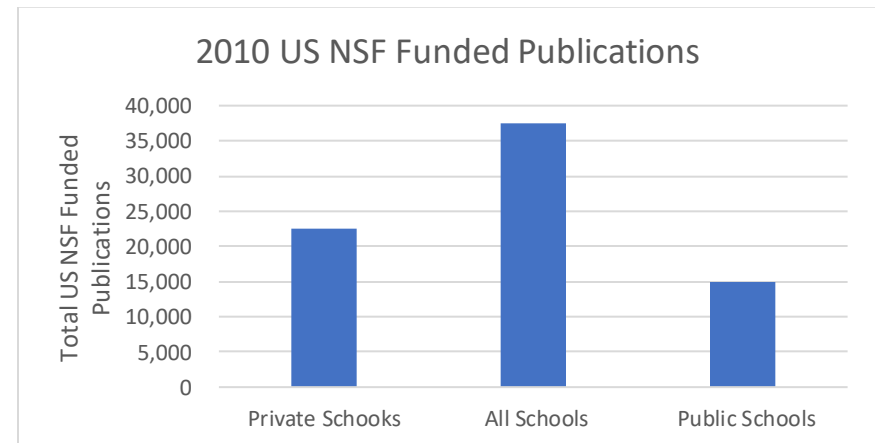
## J) Data Analysis

### Histogram graphs

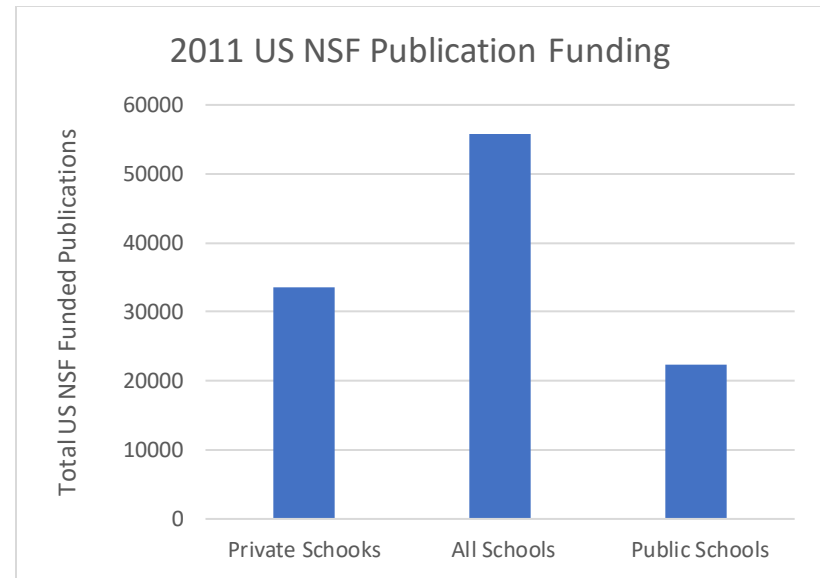
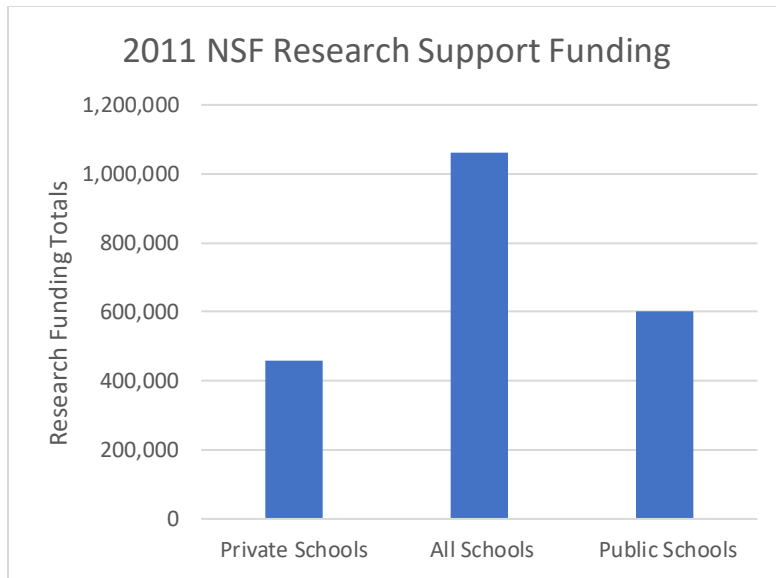
Below are a series of histograms illustrating NSF funding and the number of NSF funded publications for all schools in the sample and Private vs. Public Schools in the sample. The first histogram per year was generated by adding public and private total research funding was added together to produce the overall total funding. This measure was entered into a central column in the excel tab, and on either side column, the total private funding and total public funding were graphed. The second histogram was graphed by adding the total US-based NSF funding publications per year for private and public schools to get the overall total, and the private total publications and public total publications were included on either side.



**Figure 1:** 2010 Total NSF Research Funding.

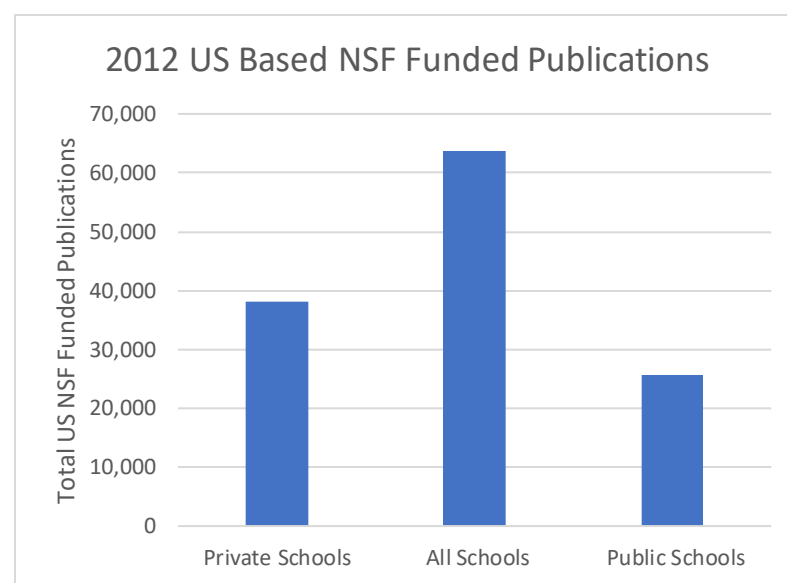
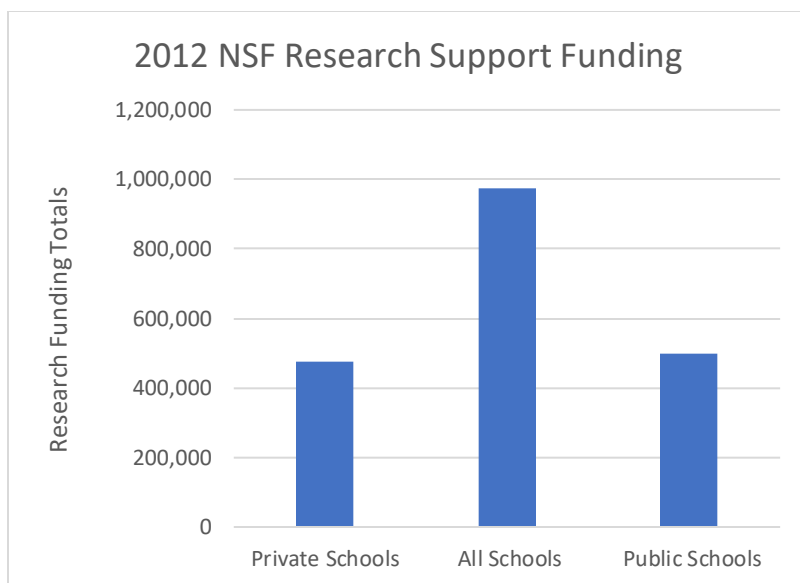


**Figure 2:** 2010 NSF United States Publications.



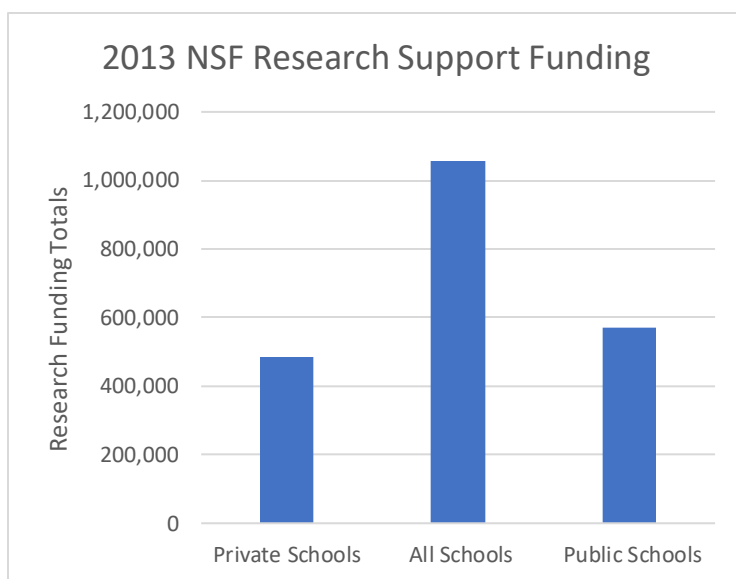
**Figures 3:** 2011 Total NSF Research Funding.

**Figure 4:** 2011 NSF United States Publications.

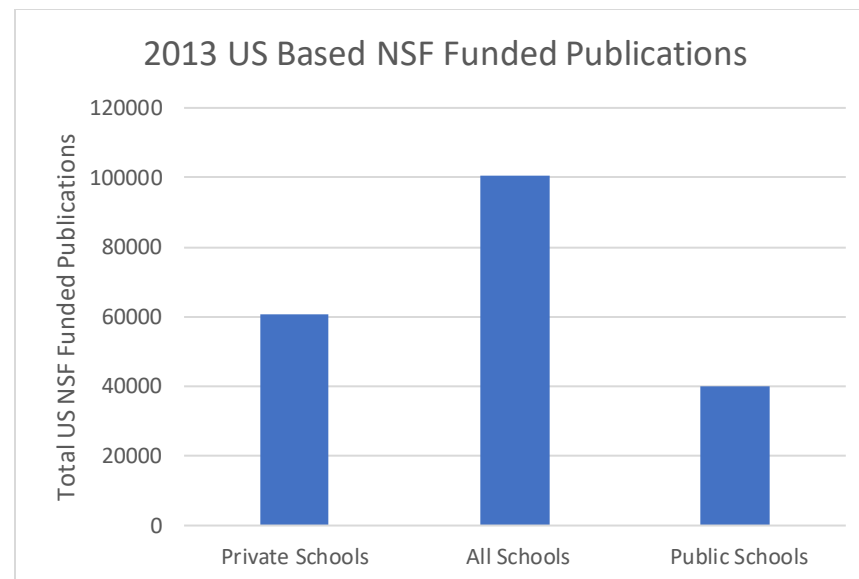


**Figures 5:** 2012 Total NSF Research Funding.

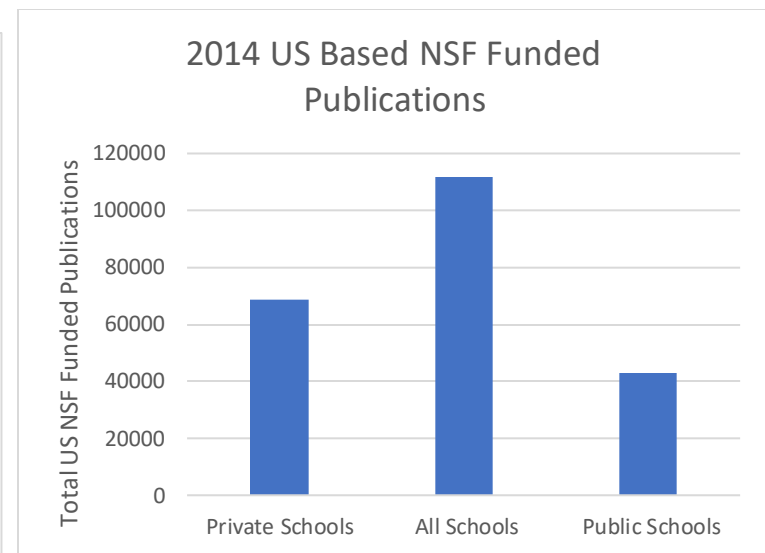
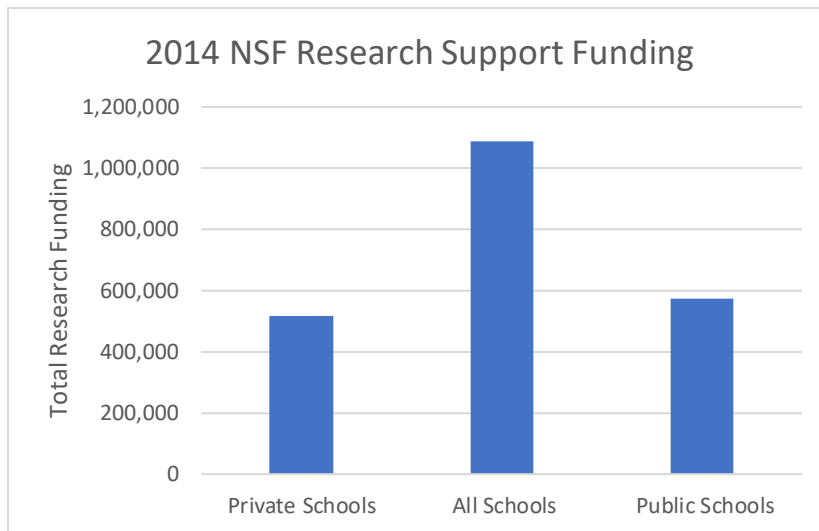
**Figure 6:** 2012 NSF United States Publications.



**Figure 7:** 2013 Total NSF Research Funding.



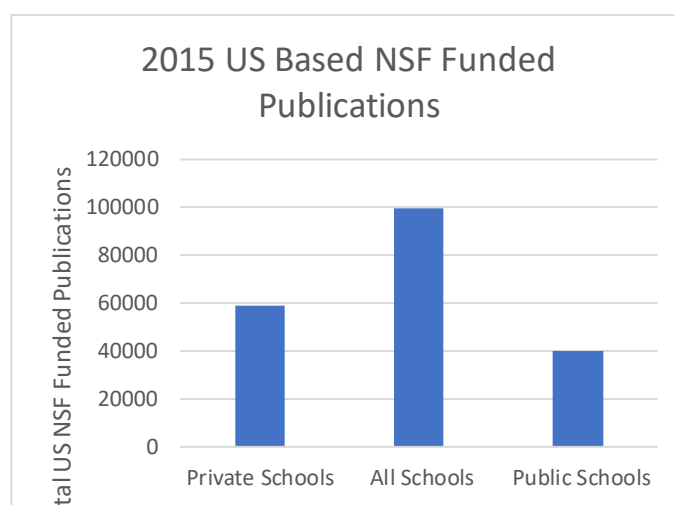
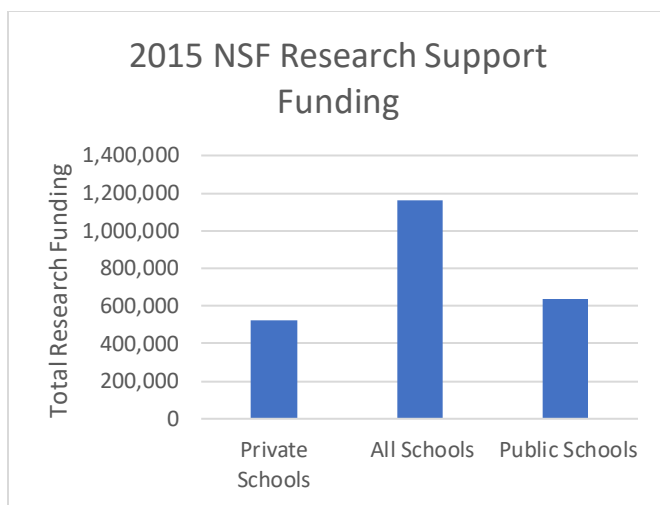
**Figure 8:** 2013 NSF United States Publications.



**Figure 9:** 2014 Total NSF Research Funding.

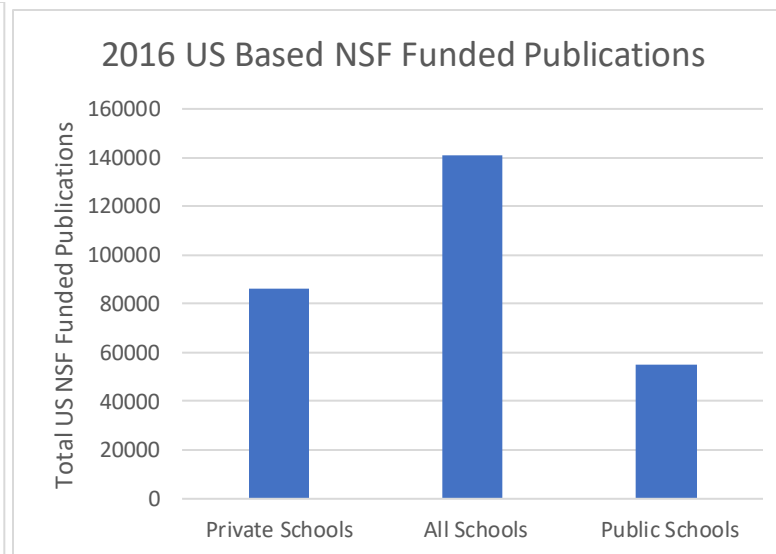
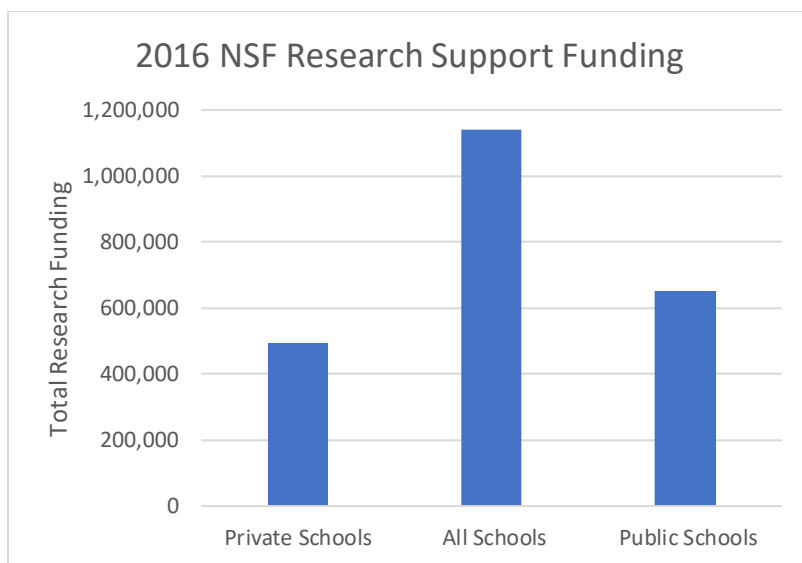
**Figure 10:** 2014 NSF United States Publications.





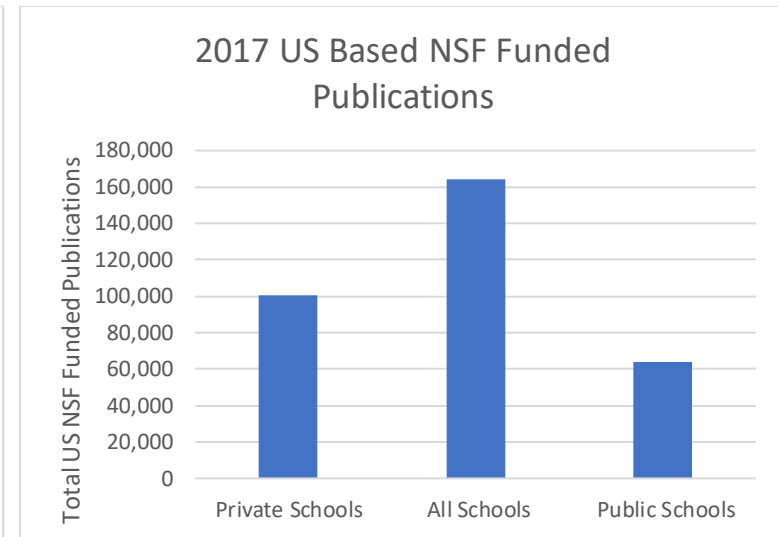
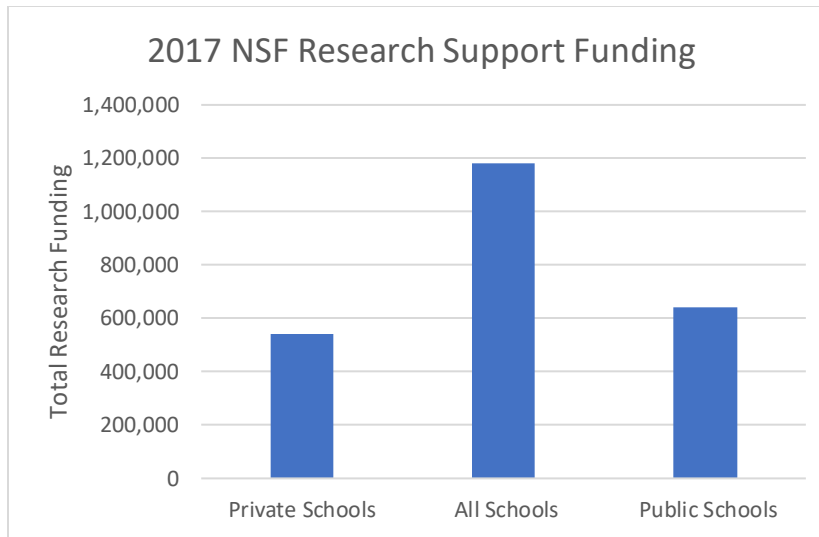
**Figure 11:** 2015 Total NSF Research Funding.

**Figure 12:** 2015 NSF United States Publications.



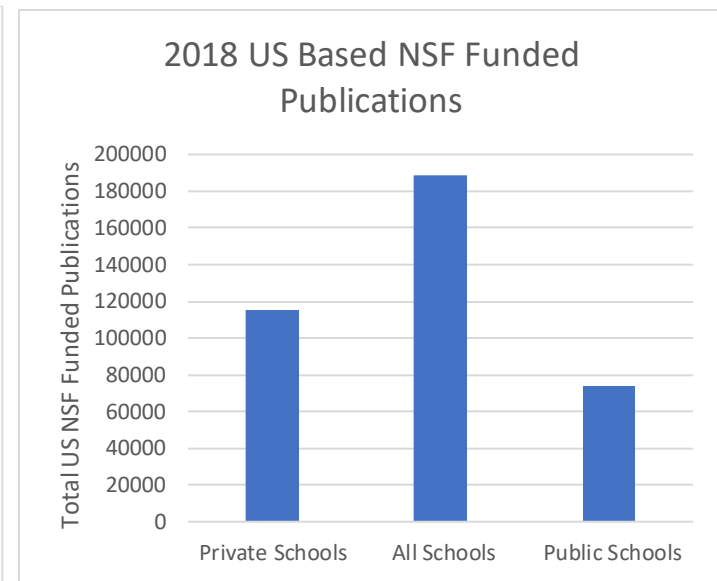
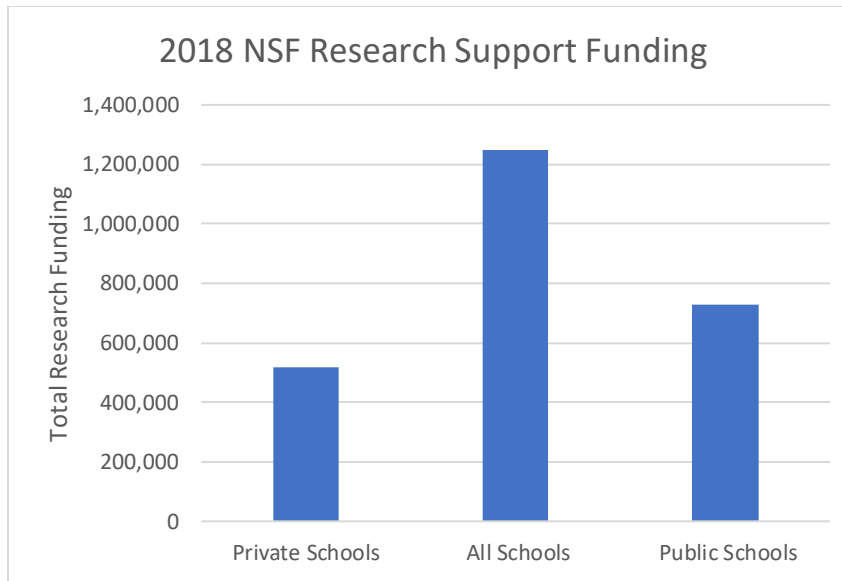
**Figure 13:** 2016 Total NSF Research Funding.

**Figure 14:** 2016 NSF United States Publications.



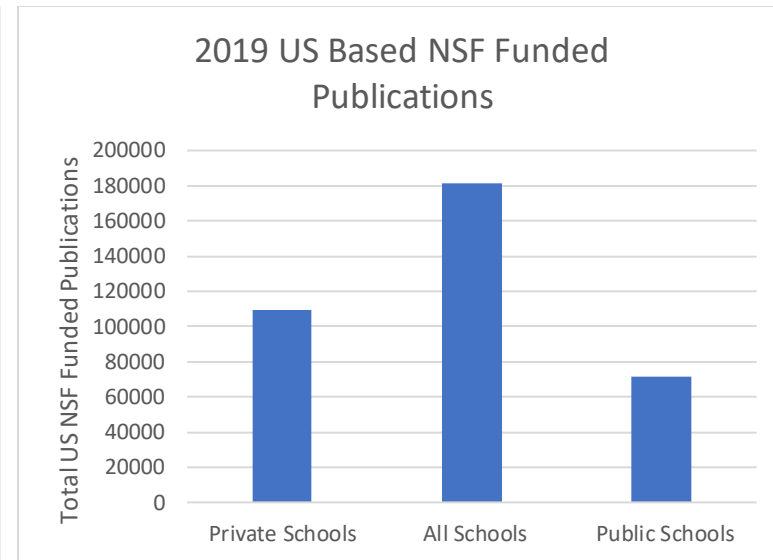
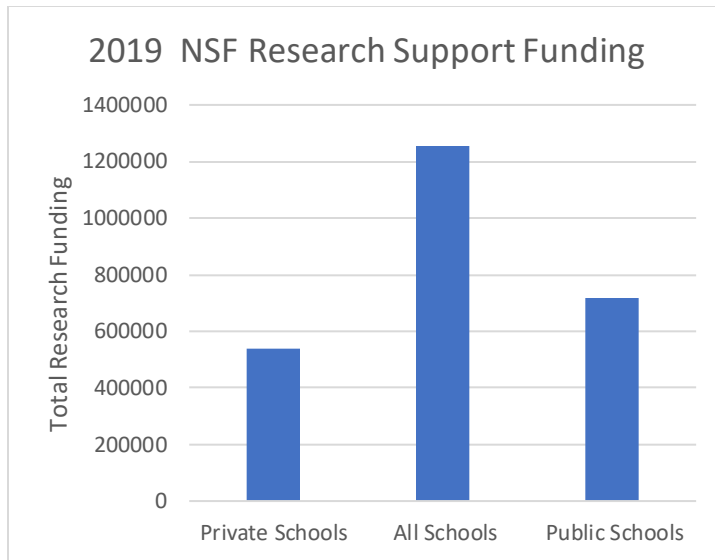
**Figure 15:** 2017 Total NSF Research Funding.

**Figure 16:** 2017 NSF United States Publications.



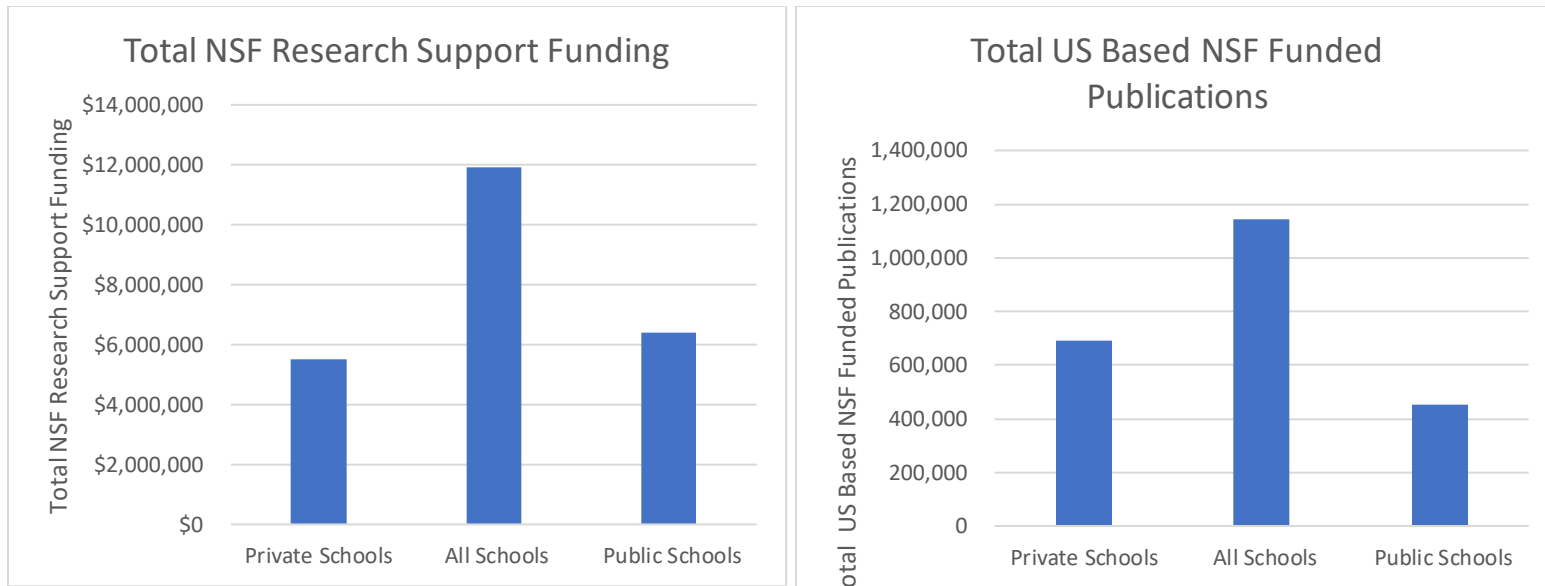
**Figure 17:** 2018 Total NSF Research Funding.

**Figure 18:** 2018 NSF United States Publications.



**Figures 19:** 2019 Total NSF Research Funding.

**Figure 20:** 2019 NSF United States Publications.



<b>Figure 21: Total NSF Research Funding</b>	<b>Figure 22: Total US Based NSF Funded Publications</b>
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For the histograms, the total of all school funding gives a helpful visual in determining the level differences between private schools and public schools. Comparing the two sets of histograms per year for total NSF Research Funding and Total US Based NSF Funded Publications, it's interesting to note that a lead in research funding did not necessarily relate to a higher amount of publications in the same year. This can often be attributed to the start date of a project. Depending on when the project starts and the funding is received determines when the requested work can begin, and often it takes several months to a year for a scientist to gather enough data to produce a publication, write the paper, and also gather the appropriate peer-reviewers. This is even demonstrated in the total

histograms showing private institutions having a lower amount of NSF funding than public institutions, there was a higher level of publications produced from 2010 through 2019.

### **Multiple and Singular Linear Regressions**

For additional data analysis to determine if there are statistically significant predictors of whether a funding recipient is public or private, linear regression analysis was conducted. Potential predictive factors were evaluated. The total model contained: Private (2) and public (1) institutions were listed as the y value (dependent variable); the independent variables were the following 7 predictors: 1) Total NSF Research Support Funding amount gained per year, 2) the number of total NSF Research Support Funding awards an institution earned per year, 3) the Scimago Overall Ranking of universities per year, 4) the Scimago Research Ranking for universities per year, 5) the Scimago Innovation Ranking for universities per year, 6) the total US-based NSF funded publications per institution per year, and 7) the total US-based NSF funded publications per top author per year. When the full model was tested, it generated a statistically significant relationship with whether an institution was public or private. By testing reduced predictor models, it was found that the full model generated the best predictors of public vs. private institutions, and the summary of the results is presented in Figure 23.

SUMMARY OUTPUT									
<i>Regression Statistics</i>									
Multiple R	0.3310914								
R Square	0.1096215								
Adjusted R Square	0.1033322								
Standard Error	0.4736996								
Observations	999								
ANOVA									
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>				
Regression	7	27.37793838	3.911134	17.42997	7.10687E-22				
Residual	991	222.3718114	0.224391						
Total	998	249.7497497							
Labels		<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Private (2) and Public (1) Institutions	Intercept	1.940228668	0.048893	39.68331	6.2673E-207	1.844283322	2.036174013	1.844283322	2.036174013
Total NSF Research Support Funding Amount (\$)	39110	7.94591E-06	1.91E-06	4.158894	3.47497E-05	4.19666E-06	1.16952E-05	4.19666E-06	1.16952E-05
Total NSF Research Support Funding Count per year	144	-0.004633406	0.000693	-6.6862	3.81936E-11	-0.00599328	-0.003273528	-0.005993283	-0.003273528
Overall Scimago Ranking	4	0.004728527	0.001298	3.641835	0.000284717	0.002180614	0.007276439	0.002180614	0.007276439
Research Scimago Ranking	7	-0.004961126	0.001139	-4.35426	1.4739E-05	-0.00719699	-0.002725264	-0.007196987	-0.002725264
Innovation Scimago Ranking	4	-0.003091695	0.000915	-3.38039	0.000752086	-0.00488647	-0.001296923	-0.004886466	-0.001296923
Total US Based NSF Funded Publications per year	179	2.15759E-05	6.03E-06	3.575519	0.000366404	9.73433E-06	3.34174E-05	9.73433E-06	3.34174E-05
Total US Based NSF Funded Publications per top Author per University	4	-0.001659583	0.00034	-4.88713	1.19272E-06	-0.00232597	-0.000993201	-0.002325966	-0.000993201

**Figure 23: Total Multiple Regression Analysis**



## **K) Discussion of Data Results**

The thesis from the beginning sought to determine whether any indicators could significantly predict whether NSF funding would be granted to private schools or public schools. In terms of predictors for public or private schools, after surveying the data, characteristics that significantly related to whether an institution was public or private were: the fiscal year, type of institution (either public or private, listing public as 1 and private as 2), total amounts of award funding and numbers per year; total Research Support award funding and numbers per year, the ranking of the overall, research, and innovation percentiles of each institution compared with its fellows, and gathered publication data: the number of papers per year (US) that were generated directly in response to NSF awards, and the number of papers per top author per institution per year.

The histograms were a statistical method of analyzing the gathered data in a visual format to determine patterns in the data. For the Histograms, two graphs were generated per year from 2010-2019, and a total overall set of graphs was also generated. The first histogram of the set used the totals of public and private schools of the NSF Research Funding, and in the center of the column, the overall total school funding was used for comparison. The second histogram set also used the totals of private and public schools for total US-based NSF funded publications and gathered the overall total for publications as a comparison. The graphs help to provide a visual look at the data and can help determine patterns in the data.

Looking at the totals per year of NSF funding, only the two graphs for 2010 showed similarities in higher funding for private schools leading to higher numbers of publications generated due to NSF funding at private institutions, and public institutions received

a lower amount of funding and lower numbers of publications. The graphs from 2011 through 2019 demonstrated an inverse pattern where private schools had less NSF funding per year but had higher levels of publications, whereas public schools had higher funding levels but had fewer publications per year. Additionally, the total overall histograms were consistent with the findings of the years 2011-2019 with private schools having lower funding but higher publication totals, and public schools showing higher funding levels but fewer publications overall. The histograms show deeper links between funding and publication of the funding results. The start date of a project can have a large impact on the project's overall timeline. Depending on the specific field of study, it can take an investigator several months to gather enough data and results to compile together for a publication, and even longer to write the paper and gather a panel of peer-reviewers to see the publication through. Also, depending on the length of the project, publications can be pushed back to after a project has finished. In terms of NSF funding, the generated histograms show that NSF has favored funding public institutions over the past decade, as supported by the gathered data. However, public and private institutions have different staffing levels and resources that can also determine how rapidly publications can be produced based on funding. Private institutions often have entire departments for research areas with numerous PIs, their teams to generate data, and a larger network of collaborators across departments and other schools. Public schools are limited in the size of their teams, the experience of their PIs, and the smaller network of collaborators available to publish at any given point in a project's lifespan.

For the regression analysis, the criterion (y value) was a numerical value that indicated whether an institution was public (1) or private (2). The predictor factors (x values) for the multiple regression included the total across all years, NSF Research Support Amount, NSF Research Support number of awards, Overall Rank, Research Rank, Innovation Rank, number of US NSF Publications

per year, and the US NSF Publications per top author of each institution. For the multiple regression analyses, a total multiple regression that included all data and predictors across all years.

Additionally, single regressions were done per year on the total dataset to determine what the predictors added to the total. For the singular regressions, only the Research Rankings, Innovation Rankings, and Publications were statistically significant as single predictor models (F test probability less than .05). A multiple regression model was put together and run with only those three predictors against private/public institutions. A comparison was run between the full model with all the predictors and the smaller model with the three predictors that were statistically significant by themselves. With this additional analysis, it was found that the full model with all the predictors is significantly better than the models with fewer predictors.

For the regression summary tables, labels were included to help identify the variables. These included: private and public institutions; total NSF Research Support award funding and numbers per year, the Overall ranking, Research ranking, and Innovation ranking percentiles of each institution; the # of US-based publications per year that were generated in response to NSF award funding, and the number of papers per top author for each institution per year. For the Multiple Regression results, the total model was used to determine the significance of predictors of NSF funding for private and public institutions, and it was found through the total model of all seven predictors with the multiple regression showed that there was significant predictive variability in the variables used.

The histograms demonstrated for eight out of the nine years of gathered data, along with the overall total, that private institutions had lower amounts of funding but produced higher numbers of publications per year as opposed to public institutions that

received higher amounts of funding but produced fewer publications in the same timeframe. This could be due to the higher overall resources private schools have available with their collaborative networks and more established PIs with greater numbers of team members. For the regression analysis, after running several differing tests, the total multiple regression model which included data and predictors spread across all years showed there was significant predictive variability in the variables used.

### **L) Conclusion**

At the beginning of the research phase, it was expected that some factors could be found that could determine or predict whether an institution would receive NSF funding, but there was uncertainty in the exact number of or type of predictor that determined whether public or private institutions received funding. It was expected that already funded institutions, whether larger or smaller schools, would have a leg up in the overall competition as they would have established investigators that knew of the NSF funding process and knew the criteria that were necessary to secure funding. The histograms show that the funding and publishing arena is extremely complex and that there is not necessarily a relationship between funding received one year and the number of publications that are generated in the same year. With a majority of the histograms, from 2011-2019 and the total overall, private schools had lower amounts of funding but produced higher numbers of publications per year as opposed to public institutions that received higher amounts of funding but produced fewer publications in the same timeframe. These results show that a years' funding is received is not necessarily the same year that publications are published. A project's start date can be important to how quickly a study can progress enough for an investigator to receive enough data to generate a publication, how quickly the publication can be

generated, and also how soon a peer-review panel can be gathered to review the paper. Additionally, the multiple regression analysis showed statistical significance in the total model of predictive variability in the variables used. Analyzing the total model helps to show the full impact the predictors have on showing the better significance of the variables as opposed to singular regression models. It was expected that the results of the full multiple regression show significance with the overall number of variables that were discussed. The results of the histogram showed a pattern from 2011-2019 and the total of private schools received lower amounts of NSF funding in one year had higher numbers of publications that same year, and public schools received higher levels of funding had lower numbers of publications that same year. This pattern shows that NSF funds more public schools in general, but private institutions have more institutional support with established investigators and collaborators to generate more publications in a given year. The results were not unexpected for a single year for private schools receiving lower funding and generating higher numbers of publications, and public schools having higher funding and generating lower numbers of publications per year. The results however were surprising due to the overall pattern of 2011-2019 and the overall total numbers from the gathered data. The results of this project could be used for future considerations of the field and help guide future studies. One aspect of a potential project could examine the number of publications per year for an institution and determine whether there were any notable differences in amounts of funding and publications in different fields of research. Other studies could investigate whether there were any notable differences in NSF funding and the number of publications produced by senior level and junior level scientists, or if the length of a project had an impact on publication numbers.

## N) References

## a) Appendices

2010 NSF Data																
Fiscal Year	Name of Institution	Private or Public institutions	Total		Research Support		State	Research Institution R1 or R2	Overall Rank Out of 367	Research Rank Out of 367	Innovation Rank Out of 367	Publications				
			Amount \$k	Count	Amount \$k	Count						# of Papers per year (US & NSF)	# of Papers per Top Author (US & NSF)	# of Papers per Year (US)	# of Papers per Top Author (US)	
2010	Johns Hopkins University		2	\$42,775	147	\$39,110	144	Maryland	R1	4	7	4	179	4	11,014	81
2010	University of Pennsylvania		2	\$32,608	138	\$30,195	135	Pennsylvania	R1	8	10	9	564	19	18,353	66
2010	Cornell University		2	\$102,551	242	\$92,791	233	New York	R1	14	12	13	465	9	11,633	78
2010	Washington University, St. Louis		2	\$16,422	90	\$15,372	88	Missouri	R1	28	31	23	104	7	5,138	62
2010	Rockefeller University		2	\$802	3	\$760	2	New York	R1	51	60	41	15	2	1,204	79
2010	DePaul University		2	\$2,847	8	\$2,439	7	Illinois	R2	183	139	190	7	2	695	12
2010	Georgetown University		2	\$4,852	27	\$4,299	25	Washington D.C.	R1	97	95	90	36	5	3,265	18
2010	University of Notre Dame		2	\$24,817	91	\$23,323	87	Indiana	R1	87	75	101	120	11	2,780	69
2010	Drexel University		2	\$22,374	76	\$18,659	66	Pennsylvania	R1	96	102	81	62	4	2,049	25
2010	Syracuse University		2	\$11,038	59	\$9,575	55	New York	R1	143	113	168	63	9	2,156	43
2010	University of Dayton		2	\$863	5	\$328	4	Ohio	R2	181	181	139	91	5	3,796	38
2010	Columbia University		2	\$91,458	262	\$86,405	256	New York	R1	11	9	14	664	9	19,955	70
2010	Rochester Institute of Technology		2	\$4,222	21	\$2,635	16	New York	R1	171	173	137	44	5	1,925	95
2010	Lehigh University		2	\$11,770	57	\$11,770	57	Pennsylvania	R2	138	131	126	81	9	1,052	41
2010	Southern Methodist University		2	\$1,879	16	\$1,666	14	Texas	R2	176	165	148	28	5	776	57
2010	University of Southern California		2	\$41,489	152	\$39,737	145	California	R1	27	28	24	659	12	13,702	73
2010	Brown University		2	\$30,069	112	\$27,071	109	Rhode Island	R1	68	61	74	2,469	8	88,394	88
2010	University of Chicago		2	\$44,317	128	\$40,111	121	Illinois	R1	34	33	40	406	8	24,470	85
2010	Florida Institute of Technology		2	\$1,186	9	\$1,186	9	Florida	R2	195	172	172	129	6	2,747	82
2010	Yale University		2	\$28,652	156	\$26,648	154	Connecticut	R1	18	17	20	237	7	11,967	58
2010	Catholic University of America		2	\$1,304	8	\$1,304	8	Washington D.C.	R2	234	220	165	15	2	1,435	12
2010	Vanderbilt University		2	\$15,765	67	\$13,144	59	Tennessee	R1	35	39	32	1506	7	5,888	45
2010	American University		2	\$753	7	\$553	5	Washington D.C.	R2	250	200	213	7,049	12	265,403	84
2010	George Washington University		2	\$6,873	41	\$5,530	35	Washington D.C.	R1	119	103	126	103	3	5,270	66
2010	Texas Christian University		2	\$609	3	\$609	3	Texas	R2	225	198	175	18	2	1,234	26
2010	Thomas Jefferson University		2	\$1,014	4	\$1,014	4	Pennsylvania	R2	95	101	79	19	2	2,620	34
2010	University of San Diego		2	\$68,560	196	\$63,613	191	California	R2	249	218	192	375	7	12,052	71
2010	Marquette University		2	\$2,639	12	\$2,639	12	Wisconsin	R2	195	167	167	28	4	943	16
2010	Illinois Institute of Technology		2	\$5,177	36	\$4,711	34	Illinois	R2	137	134	121	162	9	2,517	85
2010	Howard University		2	\$6,322	21	\$2,777	13	Washington D.C.	R2	240	236	156	543	8	20,836	106
2010	Case Western Reserve University		2	\$13,487	57	\$13,337	56	Ohio	R1	50	57	40	74	4	3,728	46
2010	Seton Hall University		2	\$117	1	\$117	1	New Jersey	R2	264	247	173	1	1	334	5
2010	Claremont Graduate University		2	\$233	2	\$233	2	California	R2	240	188	208	4	1	226	10
2010	Teacher's College, Columbia University		2	\$793	5	\$110	2	New York	R2	11	9	14	17	2	807	10
2010	University of Denver		2	\$2,257	20	\$2,257	20	Colorado	R2	224	197	175	75	2	4,980	58
2010	Tulane University		2	\$5,835	35	\$5,835	35	Louisiana	R1	109	98	104	38	2	1,555	24
2010	University of Miami		2	\$4,533	23	\$3,005	19	Florida	R2	74	68	71	217	7	6,673	43
2010	Loyola University of Chicago		2	\$1,146	8	\$1,146	8	Illinois	R2	144	142	126	5	1	753	10
2010	Clark University		2	\$1,099	11	\$813	9	Massachusetts	R2	182	128	212	1,177	8	43,843	88
2010	California Institute of Technology		2	\$118,487	115	\$71,837	113	California	R1	29	24	33	534	8	10,765	95
2010	Rensselaer Polytechnic Institute		2	\$22,314	83	\$20,980	80	New York	R1	72	74	63	117	5	1,285	27
2010	Duke University		2	\$42,685	172	\$41,046	168	Georgia	R1	16	16	16	452	7	13,190	67
2010	The New School University		2	\$543	6	\$502	5	New York	R2	233	186	202	1,640	6	92,599	90
2010	Tufts University		2	\$18,067	54	\$8,533	45	Massachusetts	R1	67	65	64	77	8	3,357	79
2010	Princeton University		2	\$59,855	166	\$56,927	165	New Jersey	R1	39	29	60	645	10	13,011	75
2010	Hampton University		2	\$2,132	6	\$1,798	4	Virginia	R2	289	256	192	57	2	2,773	16
2010	Stanford University		2	\$77,804	225	\$74,692	220	California	R1	2	2	2	530	9	16,230	68
2010	Harvard University		2	\$53,561	182	\$40,369	174	Massachusetts	R1	1	1	1	448	9	22,692	55
2010	Wake Forest University		2	\$2,795	15	\$2,633	14	North Carolina	R2	91	90	86	35	3	2,276	64
2010	Carnegie-Mellon University		2	\$73,932	224	\$65,711	209	Pennsylvania	R1	33	30	39	211	7	3,306	75

Fiscal Year	Name of Institution	Type of Institution	Total		Research Support		State	Type of Institution	Overall Rank	Research Rank	Innovation Rank	Publications			
		Private or Public	Amount \$k	Count	Amount \$k	Count		R1 or R2	Out of 367	Out of 367	Out of 367	# of Papers per year (US & NSF)	Top # of Papers per Author (US & NSF)	# of Papers per Year (US)	Top # of Papers per Top Author (US)
2010	Iowa State University	1	\$37,580	142	\$33,161	132	Iowa	R1	71	67	71	262	7	9,494	78
2010	University of California, Los Angeles	1	\$81,406	224	\$71,126	215	California	R1	5	4	5	546	12	13,726	75
2010	University of California, Davis	1	\$54,717	208	\$50,570	200	California	R1	24	20	27	595	6	16,610	94
2010	Louisiana Tech University	1	\$1,400	7	\$1,193	5	Louisiana	R2	196	218	120	15	4	525	41
2010	New York University	1	\$25,494	124	\$23,366	121	New York	R1	31	32	29	1,428	9	60,519	90
2010	University of Missouri - St. Louis	1	\$3,403	19	\$1,812	16	Missouri	R2	186	147	182	23	4	930	19
2010	Georgia State University	1	\$5,243	40	\$5,129	38	Georgia	R1	147	135	138	435	5	10,833	61
2010	Florida International University	1	\$15,285	52	\$12,597	49	Florida	R1	157	146	145	475	7	12,284	43
2010	University of Alabama in Huntsville	1	\$4,700	17	\$4,543	13	Alabama	R2	220	187	181	30	6	587	58
2010	University of Texas, Arlington	1	\$10,255	46	\$7,786	42	Texas	R1	124	127	108	65	5	1,374	45
2010	South Dakota State University	1	\$10,116	13	\$10,116	13	South Dakota	R2	210	196	157	63	3	1,547	16
2010	Utah State University	1	\$6,569	46	\$5,071	40	Utah	R2	148	127	147	265	10	7,496	55
2010	University of Massachusetts Boston	1	\$7,530	23	\$2,604	15	Massachusetts	R2	194	261	175	58	2	4,724	45
2010	Brigham Young University, Provo	1	\$5,082	39	\$5,027	37	Utah	R2	129	115	122	35	3	1,036	20
2010	University of Massachusetts, Lowell	1	\$6,235	34	\$5,303	31	Massachusetts	R2	179	184	130	29	3	626	21
2010	Boston College	1	\$4,080	27	\$3,580	26	Massachusetts	R1	121	107	123	84	5	9,829	69
2010	University of Maryland, Baltimore County	1	\$10,475	43	\$6,114	34	Maryland	R2	132	118	133	44	7	1,081	56
2010	Wayne State University	1	\$7,535	48	\$7,285	47	Michigan	R1	83	77	84	176	9	6,462	81
2010	University of Massachusetts, Dartmouth	1	\$1,755	13	\$722	10	Massachusetts	R2	213	188	168	26	3	433	13
2010	Florida Atlantic University	1	\$2,135	15	\$2,135	15	Florida	R2	158	141	156	121	3	2,344	26
2010	University of South Florida	1	\$14,212	83	\$11,308	76	Florida	R1	81	91	61	258	5	6,535	74
2010	Montclair State University	1	\$1,259	12	\$788	11	New Jersey	R2	268	230	201	6	2	265	10
2010	University of California, Riverside	1	\$16,504	96	\$15,638	95	California	R2	75	66	83	137	4	2,155	68
2010	Illinois State University	1	\$2,027	9	\$971	7	Illinois	R2	252	213	201	736	10	16,932	85
2010	University of Texas, Austin	1	\$53,053	263	\$50,105	253	Texas	R1	30	27	35	340	7	7,211	44
2010	Pennsylvania State University - University Park	1	\$65,025	302	\$56,155	294	Pennsylvania	R1	25	18	34	653	19	18,353	66
2010	University of Wyoming	1	\$11,550	56	\$10,974	53	Wyoming	R2	191	158	171	121	3	2,086	27
2010	University of Central Florida	1	\$7,724	68	\$5,315	59	Florida	R1	92	97	80	238	5	5,783	51
2010	University of Pittsburgh	1	\$22,082	137	\$19,582	129	Pennsylvania	R2	22	25	21	380	7	11,450	85
2010	University of South Alabama	1	\$1,418	10	\$1,418	10	Alabama	R2	190	191	135	37	2	2,038	28
2010	Texas A&M University	1	\$3,202	7	\$1,881	5	Texas	R1	149	160	116	1,142	7	35,159	83
2010	University of Cincinnati	1	\$10,033	55	\$7,669	49	Ohio	R1	62	63	58	75	3	4,523	33
2010	Central Michigan University	1	\$846	6	\$701	5	Michigan	R2	239	224	167	116	2	3,550	20
2010	Florida A&M University	1	\$3,785	9	\$333	4	Florida	R2	166	147	157	1,188	15	21,646	82
2010	Virginia Polytechnic Institute and State University	1	\$32,388	186	\$31,043	179	Virginia	R1	66	59	70	130	8	1,669	31
2010	Bowling Green State University	1	\$3,408	9	\$2,794	7	Ohio	R2	212	174	185	31	4	987	14
2010	Arizona State University	1	\$42,021	214	\$35,121	195	Arizona	R1	56	40	68	613	8	12,389	54
2010	University of Iowa	1	\$10,414	68	\$10,130	67	Iowa	R1	54	51	56	262	7	9,494	78
2010	Ohio State University	1	\$34,381	111	\$33,721	106	Ohio	R1	23	21	25	403	8	11,433	95
2010	East Tennessee State University	1	\$3,467	8	\$2,830	6	Tennessee	R2	236	221	167	35	2	1,108	33
2010	University of California, Berkeley	1	\$135,586	340	\$128,805	330	California	R1	9	8	11	479	6	9,260	58
2010	University of Houston	1	\$12,609	73	\$10,444	69	Texas	R1	117	109	113	435	8	15,287	69
2010	University of New Orleans	1	\$2,386	16	\$2,346	15	Louisiana	R2	127	108	134	94	8	3,816	23
2010	Wright State University	1	\$2,351	18	\$2,015	16	Ohio	R2	184	168	13	1,008	6	37,077	89
2010	University of North Carolina, Charlotte	1	\$7,417	46	\$6,230	42	North Carolina	R2	160	149	148	14	2	1,166	16
2010	University of Toledo	1	\$9,061	25	\$8,417	23	Ohio	R2	170	177	131	70	3	3,039	29
2010	Northern Arizona University	1	\$7,602	32	\$4,614	28	Arizona	R2	206	176	175	164	5	2,012	34
2010	North Dakota State University	1	\$12,179	29	\$11,748	28	North Dakota	R2	185	176	145	102	3	2,264	20
2010	Kennesaw State University	1	\$3,884	7	\$683	4	Georgia	R2	271	231	205	4	2	205	8
2010	University of Florida	1	\$36,425	177	\$31,803	170	Florida	R1	21	23	22	873	12	22,783	82

Table 1: 2010 NSF Data

2011 NSF Data															
Fiscal Year	Name of Institution	Type of Institution	Total		Research Support		State	Type of Institution	Overall Rank	Research Rank	Innovation Rank	Publications			
			Amt \$k	Cnt	Amt \$k	Cnt						# of Papers per year (US & NSF)	Top # of Papers per Author (US & NSF)	# of Papers per Year (US)	Top # of Papers per Top Author (US)
2011	Johns Hopkins University	2	\$37,332	138	\$36,212	135	Maryland	R1	6	7	4	397	52	12,505	140
2011	University of Pennsylvania	2	\$34,842	140	\$32,701	136	Pennsylvania	R1	8	9	8	784	35	19,813	104
2011	Cornell University	2	\$113,742	239	\$104,421	230	New York	R1	14	12	14	772	46	12,630	141
2011	Washington University, St. Louis	2	\$12,361	78	\$11,650	75	Missouri	R1	26	29	22	141	6	5,437	76
2011	Rockefeller University	2	\$1,238	5	\$1,081	4	New York	R1	52	66	41	66	33	1,212	119
2011	DePaul University	2	\$1,094	3	\$1,094	3	Illinois	R2	170	138	191	23	3	752	13
2011	Georgetown University	2	\$4,452	22	\$4,237	21	Washington D.C.	R1	92	98	90	69	7	3,388	24
2011	University of Notre Dame	2	\$21,628	91	\$21,056	88	Indiana	R1	89	99	99	260	57	4,101	111
2011	Drexel University	2	\$15,360	75	\$10,850	64	Pennsylvania	R1	92	102	84	94	4	2,283	29
2011	Syracuse University	2	\$13,169	64	\$11,605	60	New York	R1	135	114	166	129	15	2,307	42
2011	University of Dayton	2	\$449	4	\$449	4	Ohio	R2	169	169	133	121	5	2,823	26
2011	Columbia University	2	\$81,508	254	\$75,262	243	New York	R1	11	10	15	948	78	21,642	119
2011	Rochester Institute of Technology	2	\$7,228	37	\$3,858	27	New York	R1	172	171	143	169	57	1,697	116
2011	Lehigh University	2	\$9,652	57	\$9,187	55	Pennsylvania	R2	130	130	130	99	11	1,089	57
2011	Southern Methodist University	2	\$3,090	22	\$2,883	20	Texas	R2	177	167	153	122	78	755	119
2011	University of Southern California	2	\$1,927	11	\$1,766	10	California	R1	28	30	25	905	78	14,508	119
2011	Brown University	2	\$2,109	10	\$1,137	7	Rhode Island	R2	66	60	76	3,861	78	96,514	165
2011	University of Chicago	2	\$51,002	132	\$48,394	125	Illinois	R1	35	34	40	699	63	21,079	171
2011	Florida Institute of Technology	2	\$788	12	\$726	11	Florida	R2	206	195	171	249	57	2,932	117
2011	Yale University	2	\$776	5	\$776	5	Connecticut	R1	18	18	20	478	9	13,147	105
2011	Catholic University of America	2	\$2,054	13	\$2,054	13	Washington D.C.	R2	218	210	169	26	3	1,666	10
2011	Vanderbilt University	2	\$1,102	6	\$802	5	Tennessee	R1	33	40	31	258	30	6,637	84
2011	American University	2	\$2,606	13	\$2,606	13	Washington D.C.	R2	237	198	210	10,739	57	280,571	77
2011	George Washington University	2	\$688	9	\$517	7	Washington D.C.	R1	111	107	123	184	37	5,722	84
2011	Texas Christian University	2	\$690	10	\$650	9	Texas	R2	210	196	172	27	3	1,402	19
2011	Thomas Jefferson University	2	\$482	3	\$482	3	Pennsylvania	R2	90	103	77	50	4	2,884	48
2011	University of San Diego	2	\$1,851	7	\$1,720	6	California	R2	232	203	197	598	30	12,471	77
2011	Marquette University	2	\$1,112	7	\$593	6	Wisconsin	R2	186	167	170	41	5	1,054	14
2011	Illinois Institute of Technology	2	\$1,365	8	\$765	7	Illinois	R2	123	120	128	322	63	2,933	171
2011	Howard University	2	\$5,399	15	\$497	5	Washington D.C.	R2	231	239	161	898	51	23,094	104
2011	Case Western Reserve University	2	\$566	4	\$566	4	Ohio	R1	48	56	38	131	7	4,118	33
2011	Boston Hall University	2	\$446	3	\$380	2	New Jersey	R2	259	245	184	5	1	350	7
2011	Claremont Graduate University	2	\$956	3	\$756	2	California	R2	223	189	196	7	2	282	9
2011	Teacher's College, Columbia University	2	\$712	3	\$107	1	New York	R2	11	10	15	11	3	839	15
2011	University of Denver	2	\$493	3	\$376	2	Colorado	R2	206	187	178	111	4	5,357	30
2011	Tulane University	2	\$1,010	4	\$410	3	Louisiana	R1	104	106	104	51	4	1,632	24
2011	University of Miami	2	\$433	2	\$212	1	Florida	R2	68	69	70	299	30	7,184	77
2011	Loyola University of Chicago	2	\$2,110	11	\$1,586	10	Illinois	R2	138	143	123	11	2	812	14
2011	Clark University	2	\$1,464	5	\$267	4	Massachusetts	R2	175	132	209	1,924	78	47,999	170
2011	California Institute of Technology	2	\$1,938	6	\$742	4	California	R1	31	28	36	959	78	11,677	171
2011	Rensselaer Polytechnic Institute	2	\$558	5	\$541	4	New York	R1	72	78	68	166	9	1,379	35
2011	Duke University	2	\$3,090	4	\$405	1	Georgia	R1	15	17	13	701	35	14,670	104
2011	The New School University	2	\$458	5	\$458	5	New York	R2	227	188	209	2,304	54	101,349	99
2011	Tufts University	2	\$10,518	47	\$6,041	38	Massachusetts	R1	63	68	62	153	34	3,708	103
2011	Princeton University	2	\$119	2	\$119	2	New Jersey	R1	40	31	63	1,053	57	14,369	114
2011	Hampton University	2	\$38	1	\$38	1	Virginia	R2	199	199	199	114	32	2,949	59
2011	Stanford University	2	\$56,788	196	\$53,847	189	California	R1	2	2	2	804	53	17,624	90
2011	Harvard University	2	\$683	3	\$45	1	Massachusetts	R1	1	1	1	784	53	25,198	104
2011	Wake Forest University	2	\$216	3	\$216	3	North Carolina	R2	85	96	83	55	6	2,543	37
2011	Carnegie-Mellon University	2	\$1,458	10	\$1,458	10	Pennsylvania	R1	34	32	44	307	36	3,679	118



Fiscal Year	Name of Institution	Type of Institution	Total		Research Support		State	Type of Institution	Overall Rank	Research Rank	Innovation Rank	Publications			
		Private or Public	Amount \$k	Count	Amount \$k	Count		R1 or R2	Out of 384	Out of 384	Out of 384	# of Papers per year (US & NSF)	Top # of Papers per Author (US & NSF)	# of Papers per Year (US)	Top # of Papers per Top Author (US)
2011	Iowa State University		\$38,946	123	\$37,576	117	Iowa	R1	69	65	65	521	78	9,944	167
2011	University of California, Los Angeles		\$72,870	230	\$67,480	223	California	R1	5	4	5	673	34	14,290	119
2011	University of California, Davis		\$48,164	188	\$40,690	178	California	R1	24	21	27	987	57	17,659	132
2011	Louisiana Tech University		\$1,362	7	\$1,349	5	Louisiana	R2	193	222	128	71	47	585	82
2011	New York University		\$20,242	116	\$20,047	114	New York	R1	30	33	29	2,168	78	64,758	171
2011	University of Missouri - St. Louis		\$20,206	100	\$15,615	86	Missouri	R2	169	144	175	37	4	990	31
2011	Georgia State University		\$19,795	65	\$17,648	58	Georgia	R1	143	135	142	634	59	11,960	123
2011	Florida International University		\$15,285	51	\$13,286	48	Florida	R1	147	140	146	627	32	12,931	78
2011	University of Alabama in Huntsville		\$2,047	18	\$1,843	16	Alabama	R2	203	178	184	35	5	561	35
2011	University of Texas, Arlington		\$7,383	61	\$6,042	57	Texas	R1	114	125	108	136	59	1,519	101
2011	South Dakota State University		\$6,496	13	\$6,296	12	South Dakota	R2	202	194	165	96	4	1,783	26
2011	Utah State University		\$6,957	35	\$5,207	29	Utah	R2	137	128	145	382	10	8,082	34
2011	University of Massachusetts Boston		\$5,679	18	\$2,269	15	Massachusetts	R2	184	165	169	162	60	5,479	125
2011	Brigham Young University, Provo		\$7,648	33	\$7,513	32	Utah	R2	126	122	127	52	7	1,174	23
2011	University of Massachusetts, Lowell		\$5,036	25	\$2,731	20	Massachusetts	R2	174	190	125	48	9	665	23
2011	Boston College		\$4,086	29	\$3,431	27	Massachusetts	R1	120	113	129	219	63	9,302	127
2011	University of Maryland, Baltimore County		\$7,329	28	\$4,307	19	Maryland	R2	133	126	141	59	7	1,132	23
2011	Wayne State University		\$1,447	2	\$336	1	Michigan	R1	79	80	87	394	61	6,904	163
2011	University of Massachusetts, Dartmouth		\$3,892	17	\$1,700	10	Massachusetts	R2	195	182	170	35	4	452	18
2011	Florida Atlantic University		\$1,181	9	\$1,081	8	Florida	R2	154	140	164	163	4	2,467	36
2011	University of South Florida		\$2,183	10	\$1,980	8	Florida	R1	78	94	65	409	57	7,190	117
2011	Montclair State University		\$776	8	\$776	8	New Jersey	R2	250	226	196	5	1	282	11
2011	University of California, Riverside		\$1,013	8	\$703	6	California	R2	70	67	82	269	58	2,346	113
2011	Illinois State University		\$175	5	\$165	4	Illinois	R2	236	205	200	1,053	63	17,622	171
2011	University of Texas, Austin		\$93,480	251	\$86,575	242	Texas	R1	29	26	35	587	54	7,838	86
2011	Pennsylvania State University		\$1,825	8	\$1,236	7	Pennsylvania	R1	27	19	33	479	35	6,973	104
2011	University of Wyoming		\$3,161	19	\$3,008	18	Wyoming	R2	167	147	171	168	6	2,178	25
2011	University of Central Florida		\$10,960	74	\$9,009	65	Florida	R1	89	97	85	330	31	6,074	91
2011	University of Pittsburgh		\$8,132	26	\$6,485	23	Pennsylvania	R2	20	25	18	538	63	12,429	171
2011	University of South Alabama		\$846	4	\$62	2	Alabama	R2	180	193	133	108	25	2,302	50
2011	Texas A&M University		\$1,551	7	\$1,293	5	Texas	R1	131	152	109	1,643	78	37,776	171
2011	University of Cincinnati		\$13,841	49	\$8,235	45	Ohio	R1	60	64	56	159	23	4,820	43
2011	Central Michigan University		\$1,693	2	\$500	1	Michigan	R2	225	221	169	202	7	3,761	31
2010	Florida A&M University		\$1,195	6	\$161	3	Florida	R2	197	197	154	1,580	69	22,870	117
2010	Virginia Polytechnic Institute and State University		\$41,828	198	\$34,894	186	Virginia	R1	64	61	69	139	8	1,473	21
2011	Bowling Green State University		\$263	2	\$201	1	Ohio	R2	196	168	185	31	2	1,098	14
2011	Arizona State University		\$17,455	76	\$13,512	68	Arizona	R1	49	44	65	889	59	13,015	100
2011	University of Iowa		\$13,141	69	\$12,270	66	Iowa	R1	55	53	59	521	78	9,944	167
2011	Ohio State University		\$2,009	5	\$609	3	Ohio	R1	21	22	24	590	63	12,351	171
2011	East Tennessee State University		\$1,938	9	\$1,021	8	Tennessee	R2	227	223	172	69	31	1,044	72
2011	University of California, Berkeley		\$119,092	308	\$100,264	287	California	R1	10	8	12	745	53	9,384	105
2011	University of Houston		\$634	6	\$634	6	Texas	R1	114	114	114	653	58	16,563	112
2011	University of New Orleans		\$156	3	\$120	1	Louisiana	R2	121	111	135	99	5	3,992	36
2011	Wright State University		\$597	4	\$16	1	Ohio	R2	179	174	149	1,801	74	67,107	171
2011	University of North Carolina, Charlotte		\$16,783	69	\$11,837	57	North Carolina	R2	152	147	149	47	4	1,205	16
2011	University of Toledo		\$1,300	2	\$0	0	Ohio	R2	164	175	128	163	8	3,637	34
2011	Northern Arizona University		\$1,196	2	\$0	0	Arizona	R2	198	177	178	251	59	2,240	98
2011	North Dakota State University - Fargo		\$4,949	25	\$2,980	21	North Dakota	R2	173	167	147	53	6	762	19
2011	Kennesaw State University		\$13,002	26	\$12,909	25	Georgia	R2	253	227	199	10	6	238	7
2011	University of Florida		\$39,538	183	\$33,286	176	Florida	R1	23	24	23	1,220	58	23,953	117

Table 2: 2011 NSF Data

2012 NSF Funding																	
Fiscal Year	Name of Institution	Type of Institution	Total		Research Support		State	Type of Institution	Overall Rank	Research Rank	Innovation Rank	Publications					
			Public or Private	Amt \$k	Cnt	Amt \$k						Cnt	R1 or R2	Out of 392	Out of 392	Out of 392	# of Papers per year (US & NSF)
2012	Johns Hopkins University		2	\$36,357	136	\$32,678	132	Maryland	R1	6	5	4		546	86	14,067	215
2012	University of Pennsylvania		2	\$31,999	132	\$28,462	128	Pennsylvania	R1	8	9	8		914	96	21,424	181
2012	Cornell University		2	\$113,422	232	\$107,260	222	New York	R1	14	13	13		826	76	14,067	200
2012	Washington University, St. Louis		2	\$14,445	80	\$14,445	80	Missouri	R1	26	28	21		145	8	6,604	78
2012	Rockefeller University		2	\$844	3	\$478	2	New York	R1	57	71	38		82	54	1,278	144
2012	DePaul University		2	\$1,248	2	\$0	0	Illinois	R2	189	144	181		16	2	826	18
2012	Georgetown University		2	\$6,022	27	\$5,893	26	Washington D.C.	R1	97	97	85		58	7	4,036	31
2012	University of Notre Dame		2	\$23,262	77	\$21,272	74	Indiana	R1	91	79	96		310	56	3,454	139
2012	Drexel University		2	\$16,929	78	\$10,101	62	Pennsylvania	R1	99	104	83		104	11	2,520	45
2012	Syracuse University		2	\$15,934	75	\$12,783	72	New York	R1	147	116	163		174	31	2,612	62
2012	University of Dayton		2	\$694	5	\$694	5	Ohio	R2	186	175	137		121	4	3,138	40
2012	Columbia University		2	\$94,996	249	\$86,909	241	New York	R1	12	10	15	1,045	103	23,761	182	
2012	Rochester Institute of Technology		2	\$9,042	44	\$6,082	36	New York	R1	134	180	143		225	57	1,933	143
2012	Lafayette University		2	\$7,017	50	\$7,017	50	Pennsylvania	R2	140	126	132		68	5	996	39
2012	Southern Methodist University		2	\$1,878	20	\$1,759	19	Texas	R2	184	158	151		165	109	931	193
2012	University of Southern California		2	\$949	9	\$598	7	California	R1	28	27	24		970	109	16,321	193
2012	Brown University		2	\$1,851	8	\$662	6	Rhode Island	R2	66	53	75	4,263	112	107,774	267	
2012	University of Chicago		2	\$51,074	146	\$44,911	138	Illinois	R1	34	32	37	875	113	23,314	270	
2012	Florida Institute of Technology		2	\$2,759	17	\$2,395	14	Florida	R2	205	180	154		273	57	3,035	143
2012	Yale University		2	\$777	4	\$474	3	Connecticut	R1	17	17	17		505	89	14,715	183
2012	Catholic University of America		2	\$1,118	11	\$1,118	11	Washington D.C.	R2	222	209	153		34	4	2,013	12
2012	Vanderbilt University		2	\$774	7	\$624	5	Tennessee	R1	32	38	28		301	24	7,229	100
2012	American University		2	\$1,051	10	\$877	9	Washington D.C.	R2	233	181	197	11,732	55	304,846	85	
2012	George Washington University		2	\$1,956	16	\$1,241	13	Washington D.C.	R1	119	109	121		257	94	6,592	212
2012	Texas Christian University		2	\$471	8	\$429	7	Texas	R2	217	188	165		27	3	1,402	19
2012	Thomas Jefferson University		2	\$319	2	\$319	2	Pennsylvania	R2	90	101	71		45	5	3,256	52
2012	University of San Diego		2	\$2,375	6	\$1,431	3	California	R2	250	214	181		639	26	13,615	101
2012	Marquette University		2	\$3,251	8	\$2,051	7	Wisconsin	R2	195	169	154		51	5	1,195	14
2012	Illinois Institute of Technology		2	\$350	3	\$302	2	Illinois	R2	122	116	115		375	113	3,068	270
2012	Howard University		2	\$10,321	23	\$3,653	13	Washington D.C.	R2	233	227	149	1,090	88	25,971	211	
2012	Case Western Reserve University		2	\$649	6	\$649	6	Ohio	R1	50	55	35		149	17	4,451	33
2012	Boston Hall University		2	\$632	5	\$521	4	New Jersey	R2	271	236	183		6	1	458	8
2012	Claremont Graduate University		2	\$664	4	\$664	4	California	R2	226	176	191		10	3	275	10
2012	Teacher's College, Columbia University		2	\$4,405	8	\$406	2	New York	R2	12	10	15		179	16	779	16
2012	University of Denver		2	\$741	5	\$462	3	Colorado	R2	211	173	171		111	4	5,538	41
2012	Tulane University		2	\$601	4	\$601	4	Louisiana	R1	114	111	103		50	4	1,963	29
2012	University of Miami		2	\$35	1	\$35	1	Florida	R2	69	63	63		287	26	7,913	98
2012	Loyola University of Chicago		2	\$1,124	9	\$1,082	8	Illinois	R2	132	136	110		19	2	1,040	35
2012	Clark University		2	\$504	3	\$504	3	Massachusetts	R2	180	128	198	2,285	113	54,117	270	
2012	California Institute of Technology		2	\$1,371	4	\$189	2	California	R1	33	30	36		1,124	113	12,644	270
2012	Rensselaer Polytechnic Institute		2	\$690	5	\$386	3	New York	R1	85	86	68		165	8	1,310	36
2012	Duke University		2	\$789	2	\$405	1	Georgia	R1	15	16	14		870	90	16,422	181
2012	The New School University		2	\$494	6	\$455	5	New York	R2	240	189	195	2,798	84	113,954	183	
2012	Tufts University		2	\$13,448	57	\$8,675	45	Massachusetts	R1	64	65	55		198	89	3,940	180
2012	Princeton University		2	\$78	2	\$78	2	New Jersey	R1	42	31	60	1,189	56	15,897	133	
2012	Hampton University		2	\$425	3	\$0	0	Virginia	R2	288	250	190		148	60	3,342	131
2012	Stanford University		2	\$76,575	233	\$63,016	223	California	R1	2	2	2		938	84	19,745	162
2012	Harvard University		2	\$1,353	5	\$813	4	Massachusetts	R1	1	1	1		893	89	27,854	181
2012	Wake Forest University		2	\$240	2	\$240	2	North Carolina	R2	85	95	69		74	7	2,658	37
2012	Carnegie Mellon University		2	\$1,537	9	\$1,287	9	Pennsylvania	R1	37	33	43		374	54	3,845	142

Fiscal Year	Name of Institution	Type of Institution	Total		Research Support		State	Type of Institution	Overall Rank	Research Rank	Innovation Rank	Publications								
			Private or Public	Amt \$k	Cnt	Amt \$k						Cnt	R1 or R2	Out of 392	Out of 392	Out of 392	# of Papers per year (US & NSF)	Top # of Papers per Author (US & NSF)	# of Papers per Year (US)	Top # of Papers per Top Author (US)
2012	Iowa State University	1	\$33,698	134	\$31,216	130	Iowa	R1	72	61	74	581	111	10,837	265					
2012	University of California, Los Angeles	1	\$58,415	212	\$55,256	207	California	R1	5	4	5	727	55	15,912	151					
2012	University of California, Davis	1	\$48,983	194	\$45,922	186	California	R1	22	20	27	1,139	62	19,475	161					
2012	Louisiana Tech University	1	\$634	6	\$556	5	Louisiana	R2	214	222	130	103	70	681	147					
2012	New York University	1	\$27,799	97	\$22,738	93	New York	R1	30	29	30	2,503	113	71,965	270					
2012	University of Missouri - St. Louis	1	\$15,401	86	\$12,488	77	Missouri	R2	177	143	164	33	4	1,013	15					
2012	Georgia State University	1	\$17,812	69	\$15,551	65	Georgia	R1	148	135	135	705	83	13,157	217					
2012	Florida International University	1	\$9,292	43	\$8,147	39	Florida	R1	146	130	141	685	28	14,578	99					
2012	University of Alabama in Huntsville	1	\$4,302	26	\$4,222	25	Alabama	R2	220	180	180	34	6	637	27					
2012	University of Texas, Arlington	1	\$8,392	48	\$6,389	45	Texas	R1	117	121	101	186	86	1,738	171					
2012	South Dakota State University	1	\$9,655	16	\$9,457	14	South Dakota	R2	205	186	148	72	3	1,948	20					
2012	Utah State University	1	\$12,414	39	\$11,613	33	Utah	R2	139	123	137	388	11	8,867	57					
2012	University of Massachusetts Boston	1	\$5,659	19	\$1,581	13	Massachusetts	R2	199	165	161	217	83	6,194	222					
2012	Brigham Young University, Provo	1	\$8,108	38	\$7,534	35	Utah	R2	137	125	131	60	5	1,152	22					
2012	University of Massachusetts, Lowell	1	\$5,281	24	\$3,777	22	Massachusetts	R2	174	185	113	48	6	754	26					
2012	Boston College	1	\$4,466	27	\$3,920	24	Massachusetts	R1	126	115	125	284	87	10,648	222					
2012	University of Maryland, Baltimore County	1	\$8,283	35	\$5,377	27	Maryland	R2	146	133	135	68	7	1,084	18					
2012	Wayne State University	1	\$1,308	5	\$285	3	Michigan	R1	81	78	78	494	103	7,911	246					
2012	University of Massachusetts, Dartmouth	1	\$3,798	21	\$3,006	17	Massachusetts	R2	217	182	171	35	5	478	24					
2012	Florida Atlantic University	1	\$1,391	7	\$862	6	Florida	R2	171	147	154	156	4	2,651	30					
2012	University of South Florida	1	\$254	2	\$0	0	Florida	R1	77	92	57	436	57	8,452	143					
2012	Montclair State University	1	\$1,663	11	\$1,544	10	New Jersey	R2	243	212	176	8	1	306	15					
2012	University of California, Riverside	1	\$1,204	9	\$1,204	9	California	R2	75	66	80	253	56	2,447	132					
2012	Illinois State University	1	\$457	7	\$457	7	Illinois	R2	231	187	186	1,164	113	18,692	270					
2012	University of Texas, Austin	1	\$91,545	265	\$86,021	258	Texas	R1	29	25	34	669	90	8,495	182					
2012	Pennsylvania State University	1	\$2,140	9	\$807	6	Pennsylvania	R1	33	33	33	912	90	21,424	181					
2012	University of Wyoming	1	\$3,145	17	\$3,145	17	Wyoming	R2	175	139	166	180	8	2,482	32					
2012	University of Central Florida	1	\$12,449	71	\$10,246	63	Florida	R1	88	91	77	362	44	6,924	118					
2012	University of Pittsburgh	1	\$5,419	25	\$3,431	22	Pennsylvania	R2	20	24	18	630	113	13,323	270					
2012	University of South Alabama	1	\$1,131	5	\$833	3	Alabama	R2	180	185	121	114	48	2,617	121					
2012	Texas A&M University	1	\$950	5	\$344	3	Texas	R1	124	144	98	1,825	113	40,600	269					
2012	University of Cincinnati	1	\$9,074	49	\$8,725	47	Ohio	R1	63	62	51	197	37	5,408	52					
2012	Central Michigan University	1	\$2,106	5	\$500	1	Michigan	R2	240	219	165	236	24	4,278	38					
2010	Florida A&M University	1	\$3,896	7	\$359	3	Florida	R2	212	200	147	1,923	77	25,310	144					
2010	Virginia Polytechnic Institute and State University	1	\$37,463	196	\$34,267	182	Virginia	R1	65	59	66	152	18	1,352	30					
2012	Bowling Green State University	1	\$1,336	5	\$788	4	Ohio	R2	205	167	167	39	2	1,273	13					
2012	Arizona State University	1	\$21,889	89	\$19,889	81	Arizona	R1	51	42	56	997	86	14,433	169					
2012	University of Iowa	1	\$13,257	63	\$11,075	58	Iowa	R1	62	50	58	581	111	10,837	265					
2012	Ohio State University	1	\$2,463	5	\$83	1	Ohio	R1	21	21	22	694	113	13,541	270					
2012	East Tennessee State University	1	\$1,652	12	\$1,652	12	Tennessee	R2	225	209	157	65	24	1,141	91					
2012	University of California, Berkeley	1	\$419	6	\$419	6	California	R1	10	8	12	895	89	10,054	181					
2012	University of Houston	1	\$632	5	\$632	5	Texas	R1	112	108	106	680	51	18,186	131					
2012	University of New Orleans	1	\$2,726	3	\$67	1	Louisiana	R2	145	132	137	112	4	4,557	29					
2012	Wright State University	1	\$2,586	5	\$0	0	Ohio	R2	185	164	146	2,096	113	46,637	270					
2012	University of North Carolina, Charlotte	1	\$16,652	82	\$15,165	75	North Carolina	R2	152	139	140	73	4	1,284	15					
2012	University of Toledo	1	\$1,160	4	\$950	3	Ohio	R2	162	166	119	197	32	4,025	71					
2012	Northern Arizona University	1	\$1,174	4	\$498	2	Arizona	R2	209	179	163	284	86	2,616	169					
2012	North Dakota State University - Fargo	1	\$6,360	32	\$4,773	26	North Dakota	R2	169	158	134	48	5	861	27					
2012	Kennesaw State University	1	\$5,656	27	\$4,219	24	Georgia	R2	249	206	188	5	1	315	5					
2012	University of Florida	1	\$41,100	188	\$35,470	180	Florida	R1	24	23	23	1,304	57	26,601	144					

Table 3: 2012 NSF Data

2013 NSF Data															
Fiscal Year	Name of Institution	Type of Institution	Total		Research Support		State	Type of Institution	Overall Rank	Research Rank	Innovation Rank	Publications			
			Public or Private	Amt \$k	Cnt	Amt \$k						Cnt	R1 or R2	Out of 395	Out of 395
2013	Johns Hopkins University	2	\$40,282	126	\$39,276	124	Maryland	R1	6	5	5	740	66	14,569	165
2013	University of Pennsylvania	2	\$38,366	124	\$35,520	121	Pennsylvania	R1	9	9	9	1,441	49	21,904	110
2013	Cornell University	2	\$118,327	216	\$111,810	210	New York	R1	14	12	14	1,222	38	14,124	120
2013	Washington University, St. Louis	2	\$18,977	80	\$18,061	80	Missouri	R1	25	29	17	279	10	6,173	74
2013	Rockefeller University	2	\$926	3	\$422	2	New York	R1	60	77	41	111	45	1,457	126
2013	DePaul University	2	\$374	4	\$350	3	Illinois	R2	183	141	184	29	6	920	23
2013	Georgetown University	2	\$6,058	27	\$5,067	25	Washington D.C.	R1	93	91	84	116	7	3,901	23
2013	University of Notre Dame	2	\$21,477	88	\$20,767	85	Indiana	R1	94	79	95	441	46	3,360	118
2013	Drexel University	2	\$13,193	66	\$9,456	59	Pennsylvania	R1	104	100	93	193	10	2,611	42
2013	Syracuse University	2	\$14,459	72	\$13,479	67	New York	R1	144	116	162	244	35	2,709	88
2013	University of Dayton	2	\$1,058	6	\$1,058	6	Ohio	R2	172	169	134	189	9	3,081	33
2013	Columbia University	2	\$82,143	227	\$79,246	224	New York	R1	12	10	15	1,721	49	24,846	103
2013	Rochester Institute of Technology	2	\$9,316	41	\$4,964	30	New York	R1	189	173	155	229	97	1,870	147
2013	Lehigh University	2	\$9,321	44	\$9,321	44	Pennsylvania	R2	138	124	134	136	13	1,066	36
2013	Southern Methodist University	2	\$2,453	18	\$2,242	16	Texas	R2	177	156	156	119	59	855	126
2013	University of Southern California	2	\$443	6	\$443	6	California	R1	28	30	26	1,720	59	16,836	126
2013	Brown University	2	\$1,935	8	\$670	6	Rhode Island	R2	68	51	80	7,193	79	112,616	198
2013	University of Chicago	2	\$45,017	141	\$43,354	135	Illinois	R1	31	31	31	1,162	79	24,502	199
2013	Florida Institute of Technology	2	\$2,414	15	\$2,233	13	Florida	R2	185	173	149	383	56	3,521	147
2013	Yale University	2	\$1,643	6	\$1,025	5	Connecticut	R2	16	17	16	687	49	15,218	110
2013	Catholic University of America	2	\$1,626	13	\$1,626	13	Washington D.C.	R1	211	194	159	47	7	1,825	17
2013	Vanderbilt University	2	\$677	5	\$343	4	Tennessee	R1	31	35	28	462	33	7,423	101
2013	American University	2	\$369	6	\$369	6	Washington D.C.	R2	214	170	193	19,316	35	311,628	88
2013	George Washington University	2	\$1,715	14	\$1,146	12	Washington D.C.	R1	113	102	117	346	64	6,872	151
2013	Texas Christian University	2	\$369	6	\$369	6	Texas	R2	201	177	165	65	5	1,561	25
2013	Thomas Jefferson University	2	\$199	5	\$199	5	Pennsylvania	R2	88	96	69	58	4	3,284	60
2013	University of San Diego	2	\$5,054	9	\$1,220	8	California	R2	229	198	136	1,160	32	14,062	94
2013	Margarette University	2	\$1,265	9	\$1,265	9	Wisconsin	R2	191	170	161	64	4	1,196	15
2013	Illinois Institute of Technology	2	\$824	6	\$824	6	Illinois	R2	125	113	123	431	79	3,223	199
2013	Howard University	2	\$7,924	15	\$1,270	6	Washington D.C.	R2	209	205	147	1,746	68	27,781	175
2013	Case Western Reserve University	2	\$1,309	9	\$1,250	8	Ohio	R1	49	55	39	222	11	4,605	35
2013	Betan Hall University	2	\$680	4	\$477	3	New Jersey	R2	248	212	184	4	1	416	10
2013	Claremont Graduate University	2	\$1,344	4	\$1,095	4	California	R2	216	176	189	12	2	287	9
2013	Teacher's College, Columbia University	2	\$2,136	3	\$655	2	New York	R2	12	10	15	34	9	825	24
2013	University of Denver	2	\$596	3	\$596	3	Colorado	R2	52	52	44	225	10	5,621	38
2013	Tulane University	2	\$238	2	\$238	2	Louisiana	R1	114	110	101	96	6	1,960	33
2013	University of Miami	2	\$416	3	\$416	3	Florida	R2	63	59	59	526	31	7,992	92
2013	Loyola University of Chicago	2	\$226	3	\$226	3	Illinois	R2	127	131	108	25	3	1,104	19
2013	Clark University	2	\$796	5	\$796	5	Massachusetts	R2	179	130	194	3,630	79	55,860	198
2013	California Institute of Technology	2	\$2,618	5	\$470	2	California	R1	35	32	42	1,631	79	13,384	199
2013	Rensselaer Polytechnic Institute	2	\$623	4	\$623	4	New York	R1	89	94	75	275	10	1,454	42
2013	Duke University	2	\$3,078	5	\$405	1	Georgia	R1	15	14	13	1,216	49	16,507	110
2013	The New School University	2	\$332	3	\$332	3	New York	R2	225	185	187	4,886	51	122,694	125
2013	Tufts University	2	\$16,878	49	\$11,267	44	Massachusetts	R1	64	64	57	239	48	3,951	109
2013	Princeton University	2	\$490	3	\$414	2	New Jersey	R1	44	33	72	1,729	46	16,377	119
2013	Hampton University	2	\$362	2	\$362	2	Virginia	R2	230	265	190	225	35	3,575	78
2013	Stanford University	2	\$66,113	189	\$56,087	182	California	R1	2	2	2	1,428	50	20,640	103
2013	Harvard University	2	\$594	6	\$343	4	Massachusetts	R1	1	1	1	1,345	49	28,472	111
2013	Wake Forest University	2	\$86	1	\$86	1	North Carolina	R2	85	90	68	105	6	2,497	38
2013	Carnegie Mellon University	2	\$1,889	10	\$1,690	9	Pennsylvania	R1	40	38	53	727	45	3,910	124

Fiscal Year	Name of Institution	Type of Institution	Total		Research Support		State	Type of Institution	Overall Rank	Research Rank	Innovation Rank	Publications			
		Private or Public	Amt \$k	Cnt	Amt \$k	Cnt		R1 or R2	Out of 395	Out of 395	Out of 395	# of Papers per year (US & NSF)	Top # of Papers per Author (US & NSF)	# of Papers per Year	Top # of Papers per Top Author (US)
2013	Iowa State University	1	\$35,508	115	\$32,507	108	Iowa	R1	74	58	85	785	65	11,104	170
2013	University of California, Los Angeles	1	\$69,004	211	\$60,772	205	California	R1	5	4	4	1,249	46	16,011	125
2013	University of California, Davis	1	\$59,069	204	\$52,283	193	California	R1	21	21	24	1,717	56	20,012	147
2013	Louisiana Tech University	1	\$624	6	\$328	4	Louisiana	R2	203	209	136	95	44	640	103
2013	New York University	1	\$20,138	89	\$17,764	86	New York	R1	29	27	32	4,352	79	82,678	199
2013	University of Missouri - St. Louis	1	\$45,017	141	\$43,354	135	Missouri	R2	176	143	166	57	5	1,005	16
2013	Georgia State University	1	\$18,396	75	\$17,388	74	Georgia	R1	136	126	130	1,115	64	13,902	164
2013	Florida International University	1	\$10,539	39	\$9,841	36	Florida	R1	137	120	140	1,215	32	15,293	93
2013	University of Alabama in Huntsville	1	\$2,344	16	\$2,144	15	Alabama	R2	215	180	181	70	7	573	21
2013	University of Texas, Arlington	1	\$8,542	53	\$8,232	50	Texas	R1	117	117	103	242	45	1,610	103
2013	South Dakota State University	1	\$4,132	10	\$3,680	9	South Dakota	R2	195	182	154	173	9	2,156	19
2013	Utah State University	1	\$16,865	55	\$14,824	45	Utah	R2	133	119	133	714	12	9,276	39
2013	University of Massachusetts Boston	1	\$8,320	16	\$1,665	9	Massachusetts	R2	185	161	163	292	65	6,714	168
2013	Brigham Young University, Provo	1	\$6,461	33	\$4,911	30	Utah	R2	134	121	134	104	8	1,281	25
2013	University of Massachusetts, Lowell	1	\$3,595	22	\$2,728	19	Massachusetts	R2	169	175	126	97	8	755	14
2013	Boston College	1	\$8,903	31	\$5,662	26	Massachusetts	R1	122	112	121	321	65	11,171	168
2013	University of Maryland, Baltimore County	1	\$7,705	35	\$4,266	29	Maryland	R2	152	133	144	78	7	1,082	20
2013	Wayne State University	1	\$2,446	8	\$405	5	Michigan	R1	80	71	77	612	77	7,856	189
2013	University of Massachusetts, Dartmouth	1	\$2,186	17	\$1,528	14	Massachusetts	R2	205	175	173	38	4	506	22
2013	Florida Atlantic University	1	\$1,659	7	\$1,496	5	Florida	R2	168	146	151	293	5	2,887	32
2013	University of South Florida	1	\$274	3	\$174	2	Florida	R1	76	85	63	617	56	8,591	147
2013	Montclair State University	1	\$3,013	9	\$651	6	New Jersey	R2	228	199	177	21	3	359	11
2013	University of California, Riverside	1	\$1,262	7	\$621	3	California	R2	75	66	79	374	46	2,457	120
2013	Illinois State University	1	\$843	7	\$536	5	Illinois	R2	125	113	123	1,710	79	19,772	199
2013	University of Texas, Austin	1	\$61,585	227	\$54,885	221	Texas	R1	30	26	36	1,027	54	8,919	119
2013	Pennsylvania State University	1	\$859	3	\$259	2	Pennsylvania	R1	26	19	34	1,439	49	21,904	110
2013	University of Wyoming	1	\$3,957	19	\$3,461	15	Wyoming	R2	169	133	169	314	11	2,674	44
2013	University of Central Florida	1	\$13,090	63	\$8,535	53	Florida	R1	90	86	82	654	38	7,308	103
2013	University of Pittsburgh	1	\$3,188	18	\$1,760	15	Pennsylvania	R2	20	25	18	1,050	79	13,465	199
2013	University of South Alabama	1	\$264	3	\$264	3	Alabama	R2	171	179	124	138	34	2,719	108
2013	Texas A&M University	1	\$1,622	6	\$676	2	Texas	R1	129	145	101	3,199	79	42,537	199
2013	University of Cincinnati	1	\$4,355	33	\$4,043	30	Ohio	R1	61	62	51	252	41	5,509	97
2013	Central Michigan University	1	\$2,441	3	\$0	0	Michigan	R2	233	203	178	371	16	4,446	28
2010	Florida A&M University	1	\$1,749	2	\$0	0	Florida	R2	203	194	150	2,622	100	25,961	147
2010	Virginia Polytechnic Institute and State University	1	\$38,829	181	\$31,822	167	Virginia	R1	65	54	72	153	9	1,389	31
2013	Bowling Green State University	1	\$255	2	\$213	1	Ohio	R2	171	171	171	83	5	1,658	16
2013	Arizona State University	1	\$17,965	70	\$15,268	64	Arizona	R1	47	42	56	1,666	45	15,039	103
2013	University of Iowa	1	\$12,469	65	\$11,564	63	Iowa	R1	59	48	60	785	65	11,104	170
2013	Ohio State University	1	\$812	3	\$378	2	Ohio	R1	22	22	22	708	10	14,037	199
2013	East Tennessee State University	1	\$2,424	13	\$823	11	Tennessee	R2	204	192	154	97	31	1,225	90
2013	University of California, Berkeley	1	\$103,897	264	\$89,790	250	California	R1	10	8	12	1,221	49	10,114	111
2013	University of Houston	1	\$3,025	6	\$3,025	6	Texas	R1	111	104	109	1,037	42	19,146	117
2013	University of New Orleans	1	\$1,209	3	\$409	2	Louisiana	R2	155	138	144	189	6	4,743	65
2013	Wright State University	1	\$840	2	\$0	0	Ohio	R2	170	160	144	3,321	79	48,746	199
2013	University of North Carolina, Charlotte	1	\$14,176	82	\$12,196	76	North Carolina	R2	150	136	139	131	7	1,376	25
2013	University of Toledo	1	\$1,588	5	\$883	3	Ohio	R2	149	157	118	310	35	4,151	77
2013	Northern Arizona University	1	\$551	2	\$102	1	Arizona	R2	190	158	158	452	45	2,849	102
2013	North Dakota State University	1	\$2,326	17	\$2,222	16	North Dakota	R2	159	150	136	231	10	2,993	41
2013	Kennesaw State University	1	\$10,587	31	\$10,450	30	Georgia	R2	216	183	179	13	3	319	9
2013	University of Florida	1	\$33,464	158	\$29,299	152	Florida	R1	24	23	23	2,132	56	27,174	147

Table 4: 2013 NSF Data

2014 NSF Data															
Fiscal Year	Name of Institution	Type of Institution	Total		Research Support		State	Type of Institution	Overall Rank	Research Rank	Innovation Rank	Publications			
			Public or Private	Amt \$K	Cnt	Amt \$K						Cnt	R1 or R2	Out of 416	Out of 416
2014	Johns Hopkins University	2	\$42,288	132	\$38,101	130	Maryland	R1	5	4	5	742	48	15,878	150
2014	University of Pennsylvania	2	\$40,839	129	\$36,522	127	Pennsylvania	R1	8	9	8	1,580	32	22,448	102
2014	Cornell University	2	\$117,322	230	\$108,055	225	New York	R1	13	12	12	1,419	27	14,495	123
2014	Washington University, St. Louis	2	\$13,269	69	\$11,842	67	Missouri	R1	23	28	17	312	9	6,035	79
2014	Rockefeller University	2	\$4,092	4	\$3,652	3	New York	R1	59	85	40	99	34	1,569	97
2014	DePaul University	2	\$1,195	5	\$550	3	Illinois	R2	190	157	175	17	4	798	27
2014	Georgetown University	2	\$5,581	25	\$4,652	23	Washington D.C.	R1	93	96	85	127	9	4,063	36
2014	University of Notre Dame	2	\$27,495	88	\$25,927	84	Indiana	R1	92	81	99	426	30	3,477	100
2014	Drexel University	2	\$13,865	63	\$11,257	57	Pennsylvania	R1	100	102	95	210	8	2,789	48
2014	Syracuse University	2	\$15,687	73	\$14,472	68	New York	R1	135	118	150	253	19	2,750	74
2014	University of Dayton	2	\$1,387	6	\$1,157	5	Ohio	R2	177	170	139	196	4	3,054	20
2014	Columbia University	2	\$90,493	238	\$86,653	235	New York	R1	11	10	15	1,886	22	25,334	100
2014	Rochester Institute of Technology	2	\$10,473	50	\$7,083	38	New York	R1	190	170	158	245	42	2,060	114
2014	Lehigh University	2	\$8,103	44	\$8,059	43	Pennsylvania	R2	132	132	132	153	10	1,075	37
2014	Southern Methodist University	2	\$2,056	12	\$2,056	12	Texas	R2	173	154	153	108	31	839	117
2014	University of Southern California	2	\$1,193	9	\$1,193	9	California	R1	25	28	25	1,782	31	17,208	118
2014	Brown University	2	\$1,964	10	\$1,732	8	Rhode Island	R2	63	48	79	8,115	49	115,334	180
2014	University of Chicago	2	\$40,996	134	\$40,495	131	Illinois	R1	32	30	35	1,362	49	25,778	180
2014	Florida Institute of Technology	2	\$2,459	18	\$2,121	15	Florida	R2	186	168	151	472	42	6,400	114
2014	Yale University	2	\$537	2	\$537	2	Connecticut	R1	14	13	14	797	32	15,220	105
2014	Catholic University of America	2	\$1,569	12	\$1,569	12	Washington D.C.	R2	219	5	190	172	5	1,706	18
2014	Vanderbilt University	2	\$970	6	\$670	5	Tennessee	R1	29	33	27	543	24	7,561	90
2014	American University	2	\$991	9	\$991	9	Washington D.C.	R2	200	159	185	22,333	33	321,508	91
2014	George Washington University	2	\$820	10	\$798	10	Washington D.C.	R1	103	102	106	394	35	7,088	149
2014	Texas Christian University	2	\$1,600	12	\$1,518	11	Texas	R2	204	172	176	86	7	1,939	23
2014	Thomas Jefferson University	2	\$70	2	\$70	2	Pennsylvania	R2	85	99	70	80	6	3,239	51
2014	University of San Diego	2	\$1,231	7	\$1,187	6	California	R2	235	200	180	1,186	21	13,910	81
2014	Marquette University	2	\$498	5	\$498	5	Wisconsin	R2	188	162	161	72	7	1,200	18
2014	Illinois Institute of Technology	2	\$557	4	\$557	4	Illinois	R2	120	111	126	504	49	3,835	180
2014	Howard University	2	\$6,647	19	\$3,600	13	Washington D.C.	R2	204	199	148	2,025	41	29,952	158
2014	Case Western Reserve University	2	\$159	2	\$159	2	Ohio	R1	49	55	38	273	9	4,690	40
2014	Seton Hall University	2	\$1,267	4	\$1,036	3	New Jersey	R2	246	212	180	8	1	435	11
2014	Claremont Graduate University	2	\$305	5	\$305	5	California	R2	208	172	179	9	2	335	50
2014	Teacher's College, Columbia University	2	\$300	1	\$0	0	New York	R2	11	10	15	27	4	836	16
2014	University of Denver	2	\$363	2	\$363	2	Colorado	R2	184	155	167	242	4	5,774	40
2014	Tulane University	2	\$1,129	2	\$1,129	2	Louisiana	R1	107	112	98	124	7	2,045	56
2014	University of Miami	2	\$473	4	\$194	3	Florida	R2	56	57	60	589	20	8,038	86
2014	Loyola University of Chicago	2	\$705	6	\$637	5	Illinois	R2	124	133	109	37	3	1,063	26
2014	Clark University	2	\$1,376	6	\$608	4	Massachusetts	R2	154	134	122	4,089	49	57,860	174
2014	California Institute of Technology	2	\$2,455	4	\$182	1	California	R1	34	34	43	1,804	49	14,683	180
2014	Rensselaer Polytechnic Institute	2	\$805	5	\$708	3	New York	R1	92	105	75	253	9	1,415	36
2014	Duke University	2	\$1,802	4	\$128	2	Georgia	R1	12	15	10	1,484	31	17,132	104
2014	The New School University	2	\$197	3	\$197	3	New York	R2	225	181	185	5,670	27	127,347	129
2014	Tufts University	2	\$13,507	53	\$8,196	44	Massachusetts	R1	58	65	51	234	31	3,929	103
2014	Princeton University	2	\$289	3	\$244	2	New Jersey	R1	38	32	67	1,908	29	16,367	99
2014	Hampton University	2	\$153	2	\$48	1	Virginia	R2	261	224	185	251	17	3,537	87
2014	Stanford University	2	\$86,158	181	\$83,856	173	California	R1	2	2	3	1,684	22	21,257	99
2014	Harvard University	2	\$743	3	\$211	2	Massachusetts	R1	1	1	1	1,496	31	29,278	104
2014	Wake Forest University	2	\$193	1	\$193	1	North Carolina	R2	82	95	64	146	7	2,608	39
2014	Carnegie Mellon University	2	\$1,282	8	\$1,045	7	Pennsylvania	R1	43	38	60	704	34	3,910	95

Fiscal Year	Name of Institution	Type of Institution	Total		Research Support		State	Type of Institution	Overall Rank	Research Rank	Innovation Rank	Publications			
			Amt Sk	Cut	Amt Sk	Cut						# of Papers per year (US & NSF)	Top # of Papers per Author (US & NSF)	# of Papers per Year (US)	Top # of Papers per Top Author (US)
		Private or Public						R1 or R2	Out of 416	Out of 416	Out of 416				
2014	Iowa State University		\$36,178	103	\$30,525	98	Iowa	R1	69	60	78	804	36	11,145	165
2014	University of California, Los Angeles		\$78,776	219	\$71,307	214	California	R1	4	5	4	1,317	34	16,473	99
2014	University of California, Davis		\$53,543	184	\$49,576	181	California	R1	21	21	24	1,863	42	20,428	113
2014	Louisiana Tech University		\$200	1	\$200	1	Louisiana	R2	203	199	147	68	25	629	106
2014	New York University		\$27,648	119	\$24,989	115	New York	R1	28	27	33	5,457	49	88,952	180
2014	University of Missouri - St. Louis		\$19,889	79	\$16,736	73	Missouri	R2	183	150	172	73	8	963	20
2014	Georgia State University		\$19,569	78	\$18,368	74	Georgia	R1	126	122	124	1,211	18	14,307	158
2014	Florida International University		\$8,315	49	\$7,777	45	Florida	R1	128	117	134	1,294	22	15,600	87
2014	University of Alabama in Huntsville		\$5,268	29	\$3,611	27	Alabama	R2	202	173	173	54	5	576	18
2014	University of Texas, Arlington		\$9,318	48	\$7,117	41	Texas	R1	114	117	108	218	25	1,649	109
2014	South Dakota State University		\$8,801	16	\$7,918	13	South Dakota	R2	197	176	164	176	7	2,026	18
2014	Utah State University		\$10,003	44	\$8,297	40	Utah	R2	126	123	123	766	10	9,159	42
2014	University of Massachusetts Boston		\$4,470	20	\$2,634	16	Massachusetts	R2	180	157	158	269	36	7,350	165
2014	Brigham Young University, Provo		\$7,619	45	\$7,005	42	Utah	R2	131	121	135	123	10	1,244	17
2014	University of Massachusetts, Lowell		\$5,350	19	\$3,548	17	Massachusetts	R2	158	167	118	102	7	829	25
2014	Boston College		\$5,862	36	\$4,305	32	Massachusetts	R1	121	120	120	342	36	12,150	165
2014	University of Maryland, Baltimore County		\$8,596	37	\$5,199	31	Maryland	R2	151	139	142	107	8	1,154	21
2014	Wayne State University		\$1,045	5	\$607	4	Michigan	R1	71	73	69	649	47	8,117	169
2014	University of Massachusetts, Dartmouth		\$3,979	20	\$3,351	18	Massachusetts	R2	213	174	175	61	6	526	25
2014	Florida Atlantic University		\$352	3	\$215	2	Florida	R2	168	149	153	367	49	3,050	30
2014	University of South Florida		\$416	2	\$273	1	Florida	R1	76	85	66	714	42	8,674	114
2014	Montclair State University		\$785	6	\$652	5	New Jersey	R2	219	193	169	15	4	388	14
2014	University of California, Riverside		\$1,901	7	\$1,284	5	California	R2	73	69	73	419	33	2,408	109
2014	Illinois State University		\$1,427	5	\$952	4	Illinois	R2	203	171	176	1,926	49	20,271	180
2014	University of Texas, Austin		\$66,379	242	\$59,057	233	Texas	R1	27	26	34	1,107	28	8,860	104
2014	Pennsylvania State University - University Park		\$434	5	\$307	4	Pennsylvania	R1	24	20	30	964	30	8,365	98
2014	University of Wyoming		\$4,170	15	\$3,067	13	Wyoming	R2	160	135	163	370	7	2,666	31
2014	University of Central Florida		\$11,140	49	\$8,315	42	Florida	R1	88	94	80	688	26	7,051	86
2014	University of Pittsburgh		\$4,953	22	\$4,909	22	Pennsylvania	R2	22	25	21	1,038	49	13,745	179
2014	University of South Alabama		\$263	4	\$263	4	Alabama	R2	163	178	115	131	20	2,625	86
2014	Texas A&M University		\$2,564	6	\$0	0	Texas	R1	128	145	101	3,362	49	43,487	180
2014	University of Cincinnati		\$13,937	46	\$6,581	38	Ohio	R1	56	63	46	237	26	5,322	91
2014	Central Michigan University		\$4,113	7	\$332	2	Michigan	R2	226	197	173	462	13	4,674	29
2014	Florida A&M University		\$1,136	4	\$149	3	Florida	R2	199	193	147	2,737	86	26,147	114
2014	Virginia Polytechnic Institute and State University		\$33,667	171	\$29,491	158	Virginia	R1	60	53	67	176	10	1,437	25
2014	Bowling Green State University		\$459	3	\$459	3	Ohio	R2	183	159	160	110	3	1,769	15
2014	Arizona State University		\$19,360	68	\$14,057	63	Arizona	R1	41	42	52	1,623	26	15,393	106
2014	University of Iowa		\$13,651	65	\$12,277	62	Iowa	R1	54	49	63	804	36	11,145	165
2014	Ohio State University		\$2,069	5	\$87	1	Ohio	R2	18	22	20	1,097	48	14,274	179
2014	East Tennessee State University		\$1,350	9	\$524	6	Tennessee	R1	202	189	155	103	19	1,149	77
2014	University of California, Berkeley		\$113,803	282	\$93,404	270	California	R1	10	8	13	1,335	31	10,117	105
2014	University of Houston		\$1,352	8	\$652	6	Texas	R1	105	106	104	1,158	28	19,677	102
2014	University of New Orleans		\$4,069	3	\$106	1	Louisiana	R2	164	149	145	250	7	4,873	62
2014	Wright State University		\$366	3	\$0	0	Ohio	R2	161	156	133	3,705	49	50,120	180
2014	University of North Carolina, Charlotte		\$15,396	71	\$14,664	67	North Carolina	R2	155	138	149	113	6	1,492	19
2014	University of Toledo		\$198	1	\$0	0	Ohio	R2	202	189	117	324	19	4,517	69
2014	Northern Arizona University		\$1,523	2	\$101	1	Arizona	R2	186	165	154	419	25	2,761	106
2014	North Dakota State University - Fargo		\$2,327	16	\$2,316	15	North Dakota	R2	164	151	143	95	5	978	29
2014	Kennesaw State University		\$11,063	29	\$9,814	25	Georgia	R2	214	170	185	14	4	335	17
2014	University of Florida		\$38,418	167	\$34,507	163	Florida	R1	19	24	18	2,301	42	27,255	114

Table 5: 2014 NSF Data

2015 NSF Data																
Fiscal Year	Name of Institution	Type of Institution	Total		Research Support		State	Type of Institution	Overall Rank	Research Rank	Innovation Rank	Publications				
			Public or Private	Amt \$k	Cnt	Amt \$k						Cnt	R1 or R2	Out of 418	Out of 418	Out of 418
2015	Johns Hopkins University		2	\$34,297	138	\$30,077	134	Maryland	R1	6	4	6	715	55	16,893	197
2015	University of Pennsylvania		2	\$47,788	128	\$42,663	122	Pennsylvania	R1	9	8	9	1,430	34	22,785	129
2015	Cornell University		2	\$100,159	224	\$99,893	222	New York	R1	13	11	12	1,230	43	14,592	139
2015	Washington University, St. Louis		2	\$19,450	78	\$17,146	76	Missouri	R1	25	28	18	271	7	6,429	43
2015	Rockefeller University		2	\$2,552	6	\$2,200	5	New York	R1	60	83	40	118	32	1,672	91
2015	DePaul University		2	\$1,736	11	\$1,412	9	Illinois	R2	189	2	155	168	2	889	36
2015	Georgetown University		2	\$4,432	25	\$4,121	23	Washington D.C.	R1	93	89	87	103	7	4,074	25
2015	University of Notre Dame		2	\$21,300	101	\$19,534	95	Indiana	R1	92	76	98	412	82	3,482	95
2015	Drexel University		2	\$15,060	62	\$11,944	56	Pennsylvania	R1	103	95	99	184	8	2,943	39
2015	Syracuse University		2	\$18,324	60	\$15,603	58	New York	R1	138	109	146	219	11	2,640	64
2015	University of Dayton		2	\$899	6	\$818	5	Ohio	R2	177	165	141	184	5	3,137	21
2015	Columbia University		2	\$99,760	209	\$94,895	205	New York	R1	12	10	16	1,595	36	25,934	134
2015	Rochester Institute of Technology		2	\$14,233	51	\$7,224	41	New York	R1	192	159	168	263	51	2,196	114
2015	Lehigh University		2	\$15,017	50	\$15,017	50	Pennsylvania	R2	137	123	124	134	9	1,067	27
2015	Southern Methodist University		2	\$2,717	22	\$2,717	22	Texas	R2	178	150	160	90	37	856	134
2015	University of Southern California		2	\$968	5	\$968	5	California	R1	26	27	23	1,637	37	18,114	134
2015	Brown University		2	\$4,631	12	\$1,121	8	Rhode Island	R1	67	49	80	7,312	58	120,352	202
2015	University of Chicago		2	\$56,344	145	\$55,510	145	Illinois	R1	34	30	42	1,209	58	27,115	204
2015	Florida Institute of Technology		2	\$2,156	10	\$1,423	7	Florida	R2	186	171	149	508	37	4,652	103
2015	Yale University		2	\$20	1	\$20	1	Connecticut	R1	16	12	15	673	33	15,594	137
2015	Catholic University of America		2	\$2,229	14	\$2,229	14	Washington D.C.	R2	214	7	185	169	7	1,744	11
2015	Vanderbilt University		2	\$760	6	\$760	6	Tennessee	R1	31	31	24	525	30	7,854	91
2015	American University		2	\$3,363	15	\$3,236	13	Washington D.C.	R2	198	155	178	19,199	32	329,540	98
2015	George Washington University		2	\$808	6	\$798	5	Washington D.C.	R1	104	93	105	353	48	7,606	179
2015	Texas Christian University		2	\$864	6	\$864	6	Texas	R2	208	166	178	76	8	1,591	26
2015	Thomas Jefferson University		2	\$491	3	\$491	3	Pennsylvania	R2	88	91	71	72	7	3,494	50
2015	University of San Diego		2	\$3,452	9	\$1,843	7	California	R2	221	193	168	1,012	27	14,274	86
2015	Marquette University		2	\$1,397	12	\$1,397	12	Wisconsin	R2	185	160	158	71	4	1,284	20
2015	Illinois Institute of Technology		2	\$423	1	\$423	1	Illinois	R2	129	106	132	539	58	4,190	204
2015	Howard University		2	\$5,265	15	\$787	7	Washington D.C.	R2	197	188	144	1,779	54	31,489	192
2015	Case Western Reserve University		2	\$1,176	5	\$1,176	5	Ohio	R1	45	55	37	260	12	4,772	44
2015	Boston Hall University		2	\$80	1	\$80	1	New Jersey	R2	246	206	178	10	2	446	9
2015	Claremont Graduate University		2	\$892	6	\$644	5	California	R2	195	164	167	7	2	267	12
2015	Teacher's College, Columbia University		2	\$1,413	6	\$476	2	New York	R2	12	10	16	29	3	948	13
2015	University of Denver		2	\$362	2	\$195	1	Colorado	R2	186	146	177	230	5	5,995	46
2015	Tulane University		2	\$265	3	\$215	2	Louisiana	R1	110	105	93	126	9	2,178	58
2015	University of Miami		2	\$449	5	\$449	5	Florida	R2	57	56	51	543	27	8,350	85
2015	Loyola University of Chicago		2	\$1,884	8	\$1,494	6	Illinois	R2	132	132	109	35	4	1,163	20
2015	Clark University		2	\$714	3	\$175	2	Massachusetts	R2	151	137	114	3,672	57	59,270	197
2015	California Institute of Technology		2	\$710	2	\$185	1	California	R1	39	36	55	1,775	59	15,819	204
2015	Rensselaer Polytechnic Institute		2	\$843	6	\$805	5	New York	R1	106	99	92	197	8	1,386	45
2015	Duke University		2	\$2,373	3	\$32	1	Georgia	R1	14	15	11	1,260	33	17,908	125
2015	The New School University		2	\$624	5	\$624	5	New York	R2	219	177	178	5,207	53	134,065	172
2015	Tufts University		2	\$8,937	44	\$8,138	41	Massachusetts	R1	59	66	46	218	33	4,029	125
2015	Princeton University		2	\$1,523	4	\$333	3	New Jersey	R1	46	34	77	1,625	35	18,839	93
2015	Hampton University		2	\$107	1	\$107	1	Virginia	R2	253	214	178	248	26	3,806	116
2015	Stanford University		2	\$78,842	209	\$68,170	201	California	R1	2	2	3	1,473	34	22,649	126
2015	Harvard University		2	\$505	4	\$505	4	Massachusetts	R1	1	1	1	1,212	34	30,632	126
2015	Wake Forest University		2	\$441	4	\$441	4	North Carolina	R2	79	87	63	126	4	2,537	48
2015	Carnegie Mellon University		2	\$1,525	8	\$1,266	7	Pennsylvania	R1	43	39	57	601	52	4,040	114



Fiscal Year	Name of Institution	Type of Institution	Total		Research Support		State	Type of Institution R1 or R2	Overall Rank Out of 418	Research Rank Out of 418	Innovation Rank Out of 418	Publications				
			Amt \$k	Cnt	Amt \$k	Cnt						# of Papers per year (US & NSF)	Top # of Papers per Author (US & NSF)	# of Papers per Year (US)	Top # of Papers per Top Author (US)	
2015	Iowa State University	Private	1	\$39,544	105	\$35,444	98	Iowa	R1	69	58	78	748	53	11,297	197
2015	University of California, Los Angeles	Private	1	\$74,317	221	\$65,549	215	California	R1	5	5	5	1,238	35	17,077	98
2015	University of California, Davis	Private	1	\$48,025	187	\$41,116	180	California	R1	24	21	26	1,722	46	21,077	105
2015	Louisiana Tech University	Private	1	\$560	4	\$560	4	Louisiana	R2	219	193	166	77	29	621	126
2015	New York University	Private	1	\$36,599	126	\$31,639	120	New York	R1	30	26	30	4,643	59	90,719	204
2015	University of Missouri - St. Louis	Private	1	\$18,703	88	\$15,792	80	Missouri	R2	190	151	175	61	4	1,011	14
2015	Georgia State University	Private	1	\$23,761	83	\$21,569	79	Georgia	R1	130	111	128	1,197	51	15,225	191
2015	Florida International University	Private	1	\$17,979	62	\$15,580	55	Florida	R1	134	107	146	1,232	30	16,838	85
2015	University of Alabama in Huntsville	Private	1	\$4,541	22	\$3,783	20	Alabama	R2	204	173	171	46	5	550	27
2015	University of Texas, Arlington	Private	1	\$7,695	60	\$6,704	56	Texas	R1	127	112	122	170	29	1,617	127
2015	South Dakota State University	Private	1	\$10,810	12	\$10,748	11	South Dakota	R2	196	173	158	173	9	2,121	31
2015	Utah State University	Private	1	\$16,397	48	\$14,047	42	Utah	R2	125	115	115	682	15	9,672	31
2015	University of Massachusetts Boston	Private	1	\$3,944	21	\$3,264	17	Massachusetts	R2	178	152	157	250	53	7,849	197
2015	Brigham Young University, Provo	Private	1	\$5,947	40	\$5,419	38	Utah	R2	139	109	148	167	6	3,394	32
2015	University of Massachusetts, Lowell	Private	1	\$6,557	30	\$6,068	28	Massachusetts	R2	167	165	128	66	4	815	21
2015	Boston College	Private	1	\$5,411	32	\$5,020	31	Massachusetts	R1	121	111	110	343	53	12,957	197
2015	University of Maryland, Baltimore County	Private	1	\$9,853	39	\$7,425	34	Maryland	R2	151	134	139	91	7	1,231	21
2015	Wayne State University	Private	1	\$929	5	\$280	3	Michigan	R1	70	72	65	538	55	8,145	165
2015	University of Massachusetts, Dartmouth	Private	1	\$3,353	14	\$2,229	12	Massachusetts	R2	212	170	178	46	3	554	31
2015	Florida Atlantic University	Private	1	\$506	7	\$371	4	Florida	R2	172	145	157	312	8	3,067	29
2015	University of South Florida	Private	1	\$892	4	\$856	3	Florida	R1	85	79	76	707	38	9,253	103
2015	Montclair State University	Private	1	\$628	7	\$434	5	New Jersey	R2	208	188	160	26	4	391	12
2015	University of California, Riverside	Private	1	\$2,469	9	\$1,060	6	California	R2	75	71	76	361	35	2,603	103
2015	Illinois State University	Private	1	\$45	1	\$45	1	Illinois	R2	198	169	168	1,682	59	20,531	204
2015	University of Texas, Austin	Private	1	\$83,582	252	\$73,424	239	Texas	R1	29	24	32	1,107	28	8,860	104
2015	Pennsylvania State University	Private	1	\$1,917	6	\$1,058	4	Pennsylvania	R1	27	19	36	1,440	34	22,785	129
2015	University of Wyoming	Private	1	\$3,423	10	\$1,283	6	Wyoming	R2	159	128	162	324	8	2,668	41
2015	University of Central Florida	Private	1	\$10,024	55	\$8,408	47	Florida	R1	100	88	102	603	36	7,462	90
2015	University of Pittsburgh	Private	1	\$6,233	31	\$5,623	29	Pennsylvania	R2	19	23	23	977	65	13,908	204
2015	University of South Alabama	Private	1	\$261	3	\$261	3	Alabama	R2	186	174	145	156	34	2,694	94
2015	Texas A&M University	Private	1	\$1,226	7	\$76	1	Texas	R1	131	141	104	2,908	59	44,196	204
2015	University of Cincinnati	Private	1	\$11,997	53	\$11,720	51	Ohio	R1	61	64	52	230	19	5,530	84
2015	Central Michigan University	Private	1	\$450	1	\$450	1	Michigan	R2	206	190	157	353	13	4,829	38
2015	Florida A&M University	Private	1	\$3,267	6	\$75	2	Florida	R2	191	189	137	2,681	82	27,160	103
2015	Virginia Polytechnic Institute and State University	Private	1	\$50,143	180	\$44,788	169	Virginia	R1	63	51	72	182	10	1,390	25
2015	Bowling Green State University	Private	1	\$1,163	4	\$1,163	4	Ohio	R2	184	157	160	97	4	1,862	15
2015	Arizona State University	Private	1	\$15,039	77	\$14,051	70	Arizona	R1	38	42	45	1,515	29	15,832	126
2015	University of Iowa	Private	1	\$13,702	62	\$12,799	59	Iowa	R1	58	49	59	748	53	11,297	197
2015	Ohio State University	Private	1	\$2,299	5	\$460	1	Ohio	R1	23	20	25	956	65	14,747	204
2015	East Tennessee State University	Private	1	\$2,445	14	\$1,314	8	Tennessee	R2	193	183	146	110	31	1,235	80
2015	University of California, Berkeley	Private	1	\$112,530	269	\$92,143	249	California	R1	11	9	13	1,237	35	10,419	137
2015	University of Houston	Private	1	\$935	8	\$550	7	Texas	R1	109	98	105	1,017	31	20,816	107
2015	University of New Orleans	Private	1	\$820	2	\$85	1	Louisiana	R2	170	153	143	222	10	4,970	57
2015	Wright State University	Private	1	\$762	3	\$0	0	Ohio	R2	164	153	136	3,474	67	52,825	190
2015	University of North Carolina, Charlotte	Private	1	\$18,609	82	\$16,120	78	North Carolina	R2	154	133	146	81	3	1,410	18
2015	University of Toledo	Private	1	\$500	1	\$500	1	Ohio	R2	140	138	112	331	25	4,731	59
2015	Northern Arizona University	Private	1	\$469	3	\$70	2	Arizona	R2	181	161	154	441	30	2,999	126
2015	North Dakota State University - Fargo	Private	1	\$1,725	10	\$1,644	9	North Dakota	R2	169	142	155	214	9	2,926	50
2015	Kennesaw State University	Private	1	\$9,274	19	\$7,625	16	Georgia	R2	209	168	178	24	6	389	37
2015	University of Florida	Private	1	\$47,457	173	\$45,504	167	Florida	R1	22	25	19	2,126	38	28,221	103

Table 6: 2015 NSF Data

2016 NSF Data															
Fiscal Year	Name of Institution	Type of Institution	Total		Research Support		State	Type of Institution	Overall Rank	Research Rank	Innovation Rank	Publications			
			Public or Private	Amt \$k	Cnt	Amt \$k						Cnt	Out of 411	Out of 411	Out of 411
2016	Johns Hopkins University	2	\$42,391	131	\$38,548	129	Maryland	R1	5	4	4	931	83	17,463	232
2016	University of Pennsylvania	2	\$41,330	120	\$35,480	114	Pennsylvania	R1	8	8	9	1,848	52	23,205	150
2016	Cornell University	2	\$100,878	209	\$96,694	205	New York	R1	13	12	11	1,604	76	15,463	198
2016	Washington University, St. Louis	2	\$23,564	84	\$20,680	83	Missouri	R1	27	29	20	331	8	6,396	43
2016	Rockefeller University	2	\$983	5	\$494	4	New York	R1	64	92	40	121	24	1,640	44
2016	DePaul University	2	\$922	8	\$583	6	Illinois	R2	216	171	167	30	3	1,181	32
2016	Georgetown University	2	\$6,216	30	\$5,858	29	Washington D.C.	R1	93	94	84	157	8	5,556	21
2016	University of Notre Dame	2	\$26,614	101	\$23,526	96	Indiana	R1	108	78	133	559	64	3,543	120
2016	Drexel University	2	\$14,392	80	\$10,738	72	Pennsylvania	R1	113	99	115	202	9	3,152	55
2016	Syracuse University	2	\$14,957	68	\$13,239	64	New York	R1	145	118	141	334	26	2,757	55
2016	University of Dayton	2	\$1,312	4	\$1,312	4	Ohio	R2	165	178	113	247	5	3,208	21
2016	Columbia University	2	\$89,730	203	\$87,479	202	New York	R1	12	10	14	2,287	68	26,891	150
2016	Rochester Institute of Technology	2	\$13,133	57	\$7,863	43	New York	R1	198	163	165	388	69	2,297	130
2016	Lehigh University	2	\$9,502	52	\$8,262	50	Pennsylvania	R2	141	131	120	174	9	1,030	20
2016	Southern Methodist University	2	\$3,207	21	\$3,161	20	Texas	R2	183	150	164	131	59	902	140
2016	University of Southern California	2	\$765	7	\$765	7	California	R1	21	28	16	2,386	68	18,542	150
2016	Brown University	2	\$2,204	7	\$760	6	Rhode Island	R2	68	50	90	10,273	101	124,350	213
2016	University of Chicago	2	\$50,356	159	\$45,891	156	Illinois	R1	34	31	35	1,691	103	26,969	232
2016	Florida Institute of Technology	2	\$2,165	14	\$2,040	12	Florida	R2	177	179	133	772	69	5,021	137
2016	Yale University	2	\$719	3	\$719	3	Connecticut	R1	15	13	17	961	54	15,839	160
2016	Catholic University of America	2	\$1,771	12	\$1,771	12	Washington D.C.	R2	219	192	160	65	7	1,856	19
2016	Vanderbilt University	2	\$525	3	\$525	3	Tennessee	R1	32	32	22	674	56	8,031	117
2016	American University	2	\$1,090	12	\$1,010	11	Washington D.C.	R2	207	162	167	27,080	37	333,623	122
2016	George Washington University	2	\$355	4	\$355	4	Washington D.C.	R1	106	90	111	568	93	7,916	198
2016	Texas Christian University	2	\$562	7	\$562	7	Texas	R2	222	177	167	164	47	1,795	79
2016	Thomas Jefferson University	2	\$205	1	\$205	1	Pennsylvania	R2	99	98	88	99	9	3,646	54
2016	University of San Diego	2	\$409	6	\$409	6	California	R2	201	197	141	1,464	49	14,472	105
2016	Marquette University	2	\$1,738	9	\$1,738	9	Wisconsin	R2	188	171	151	106	10	1,334	27
2016	Illinois Institute of Technology	2	\$508	3	\$437	2	Illinois	R2	149	126	145	811	103	4,428	232
2016	Howard University	2	\$3,822	27	\$2,061	18	Washington D.C.	R2	196	190	138	2,601	97	32,592	203
2016	Case Western Reserve University	2	\$293	2	\$293	2	Ohio	R1	54	57	49	351	15	4,947	42
2016	Seton Hall University	2	\$1,771	5	\$1,464	3	New Jersey	R2	256	213	167	20	3	454	14
2016	Claremont Graduate University	2	\$372	2	\$372	2	California	R2	224	180	167	9	2	261	10
2016	Teacher's College, Columbia University	2	\$2,739	7	\$901	3	New York	R2	12	10	14	38	5	1,039	12
2016	University of Denver	2	\$1,292	2	\$1,292	2	Colorado	R2	200	152	167	302	5	6,013	35
2016	Tulane University	2	\$1,630	7	\$998	6	Louisiana	R1	109	110	82	160	10	2,145	50
2016	University of Miami	2	\$1,457	4	\$457	3	Florida	R2	50	56	45	623	49	8,564	106
2016	Loyola University of Chicago	2	\$1,692	7	\$1,457	5	Illinois	R2	143	140	114	93	64	1,285	137
2016	Clark University	2	\$662	3	\$662	3	Massachusetts	R2	197	150	167	5,283	101	61,126	214
2016	California Institute of Technology	2	\$2,288	5	\$640	2	California	R1	43	37	66	2,756	102	16,668	231
2016	Rensselaer Polytechnic Institute	2	\$230	1	\$230	1	New York	R1	105	109	81	264	10	1,314	40
2016	Duke University	2	\$2,146	5	\$754	2	Georgia	R1	14	14	13	1,667	58	18,042	135
2016	The New School University	2	\$1,230	5	\$1,230	5	New York	R2	228	183	167	7,250	99	141,211	220
2016	Tufts University	2	\$13,368	50	\$9,200	45	Massachusetts	R1	58	70	43	324	54	4,407	131
2016	Princeton University	2	\$144	1	\$144	1	New Jersey	R1	48	38	74	2,344	56	17,755	114
2016	Hampton University	2	\$246	2	\$246	2	Virginia	R2	262	218	167	358	47	3,916	105
2016	Stanford University	2	\$65,296	205	\$56,414	198	California	R1	2	2	2	2,190	68	23,495	151
2016	Harvard University	2	\$1,188	3	\$1,188	3	Massachusetts	R1	1	1	1	1,784	55	32,214	133
2016	Wake Forest University	2	\$221	1	\$221	1	North Carolina	R1	81	92	63	162	7	2,602	50
2016	Carnegie Mellon University	2	\$1,487	8	\$1,165	6	Pennsylvania	R1	51	47	65	978	66	4,000	125

Fiscal Year	Name of Institution	Type of Institution	Total		Research Support		State	Type of Institution	Overall Rank	Research Rank	Innovation Rank	Publications			
			Amt \$k	Cnt	Amt \$k	Cnt						# of Papers per year (US & NSF)	Top # of Papers per Author (US & NSF)	# of Papers per Year (US)	Top # of Papers per Top Author (US)
2016	Iowa State University	1	\$36,890	110	\$28,389	104	Iowa	R1	71	59	72	1,059	103	11,548	232
2016	University of California, Los Angeles	1	\$71,725	220	\$64,147	215	California	R1	6	5	7	1,821	58	17,064	118
2016	University of California, Davis	1	\$45,462	172	\$41,291	168	California	R1	26	22	33	2,404	63	21,685	127
2016	Louisiana Tech University	1	\$8,488	9	\$7,489	8	Louisiana	R2	221	196	159	140	68	700	150
2016	New York University	1	\$34,984	125	\$30,021	119	New York	R1	24	24	26	5,930	103	91,867	233
2016	University of Missouri - St. Louis	1	\$20,834	91	\$16,318	81	Missouri	R2	209	163	167	103	10	1,153	19
2016	Georgia State University	1	\$28,087	105	\$22,121	102	Georgia	R1	124	116	113	1,636	95	15,533	224
2016	Florida International University	1	\$14,512	55	\$10,665	51	Florida	R1	136	113	145	1,762	69	17,731	130
2016	University of Alabama in Huntsville	1	\$5,866	20	\$3,550	17	Alabama	R2	227	183	167	96	18	637	28
2016	University of Texas, Arlington	1	\$9,799	54	\$8,842	49	Texas	R1	123	119	110	256	57	1,627	135
2016	South Dakota State University	1	\$1,706	7	\$1,526	6	South Dakota	R2	193	174	153	228	9	2,245	26
2016	Utah State University	1	\$10,015	36	\$6,560	29	Utah	R2	136	121	113	989	65	10,192	90
2016	University of Massachusetts Boston	1	\$3,177	18	\$1,853	15	Massachusetts	R2	190	156	164	386	128	8,470	232
2016	Brigham Young University	1	\$6,802	34	\$6,419	33	Utah	R2	151	117	161	212	9	4,110	37
2016	University of Massachusetts, Lowell	1	\$5,283	24	\$5,192	22	Massachusetts	R2	181	176	138	109	5	916	23
2016	Boston College	1	\$7,383	38	\$5,525	35	Massachusetts	R1	35	123	28	548	128	13,812	232
2016	University of Maryland, Baltimore County	1	\$12,332	36	\$5,578	29	Maryland	R2	154	144	129	162	10	1,295	21
2016	Wayne State University	1	\$720	5	\$720	5	Michigan	R1	67	74	55	768	115	8,303	181
2016	University of Massachusetts, Dartmouth	1	\$3,323	14	\$2,092	11	Massachusetts	R2	225	181	167	75	7	566	33
2016	Florida Atlantic University	1	\$749	6	\$650	5	Florida	R2	181	157	156	441	16	3,278	27
2016	University of South Florida	1	\$1,003	4	\$897	3	Florida	R1	76	80	60	964	95	9,388	136
2016	Montclair State University	1	\$2,646	9	\$1,342	5	New Jersey	R2	189	193	132	43	22	417	28
2016	University of California, Riverside	1	\$1,349	6	\$1,349	6	California	R2	89	76	100	575	62	2,747	124
2016	Illinois State University	1	\$45	1	\$45	1	Illinois	R2	223	177	167	2,429	103	20,775	232
2016	University of Texas, Austin	1	\$99,293	229	\$94,916	221	Texas	R1	28	25	31	1,331	61	9,417	161
2016	Pennsylvania State University	1	\$1,441	6	\$1,056	5	Pennsylvania	R1	31	19	48	2,065	68	23,207	150
2016	University of Wyoming	1	\$3,004	16	\$2,522	15	Wyoming	R2	172	135	166	430	7	2,767	22
2016	University of Central Florida	1	\$13,092	50	\$10,275	44	Florida	R1	102	96	100	888	56	7,891	118
2016	University of Pittsburgh	1	\$5,864	33	\$5,181	28	Pennsylvania	R2	22	26	22	1,349	103	13,929	232
2016	University of South Alabama	1	\$881	4	\$881	4	Alabama	R2	181	182	133	230	65	2,783	125
2016	Texas A&M University	1	\$2,470	14	\$681	8	Texas	R1	120	150	77	4,051	103	46,112	232
2016	University of Cincinnati	1	\$13,288	57	\$9,966	53	Ohio	R1	70	66	64	257	27	5,677	75
2016	Central Michigan University	1	\$537	5	\$401	3	Michigan	R2	218	193	159	506	17	4,928	32
2016	Florida A&M University	1	\$3,053	8	\$556	3	Florida	R2	240	196	167	2,976	99	28,150	139
2016	Virginia Polytechnic Institute and State University	1	\$44,979	160	\$40,012	149	Virginia	R1	74	52	105	182	15	1,392	29
2016	Bowling Green State University	1	\$159	1	\$159	1	Ohio	R2	180	168	144	135	7	1,836	17
2016	Arizona State University	1	\$19,558	76	\$18,089	70	Arizona	R1	37	43	37	2,089	56	16,315	134
2016	University of Iowa	1	\$14,450	60	\$9,048	52	Iowa	R1	55	51	54	1,059	103	11,548	232
2016	Ohio State University	1	\$4,271	10	\$976	3	Ohio	R1	23	23	27	1,305	103	14,900	232
2016	East Tennessee State University	1	\$1,238	10	\$773	7	Tennessee	R2	214	188	160	155	49	1,316	104
2016	University of California, Berkeley	1	\$117,995	287	\$96,315	273	California	R1	11	9	12	1,812	56	10,602	161
2016	University of Houston	1	\$1,801	11	\$1,465	9	Texas	R1	110	105	98	1,577	70	21,377	152
2016	University of New Orleans	1	\$518	4	\$418	3	Louisiana	R2	196	169	159	269	10	4,997	92
2016	Wright State University	1	\$521	3	\$78	1	Ohio	R2	174	159	145	4,824	101	55,120	219
2016	University of North Carolina, Charlotte	1	\$26,375	81	\$23,254	75	North Carolina	R1	161	139	141	104	4	1,442	21
2016	University of Toledo	1	\$3,654	7	\$1,377	5	Ohio	R2	163	141	141	474	22	5,294	66
2016	Northern Arizona University	1	\$493	4	\$133	2	Arizona	R2	37	171	162	589	55	3,001	133
2016	North Dakota State University	1	\$6,393	17	\$4,274	14	North Dakota	R2	175	148	158	289	8	3,159	42
2016	Kennesaw State University	1	\$7,876	22	\$7,665	22	Georgia	R2	224	179	167	33	5	470	16
2016	University of Florida	1	\$51,332	188	\$46,428	181	Florida	R1	18	27	15	2,914	71	29,185	139

Table 7: 2016 NSF Data

2017 NSF Data															
Fiscal Year	Name of Institution	Type of Institution	Total		Research Support		State	Type of Institution	Overall Rank	Research Rank	Innovation Rank	Publications			
			Amt \$k	Cut	Amt \$k	Cut						# of Papers per year (US & NSF)	Top # of Papers per Author (US & NSF)	# of Papers per Year (US)	Top # of Papers per Top Author (US)
2017	Johns Hopkins University	2	\$32,420	118	\$29,515	114	Maryland	R1 or R2	Out of 418	Out of 418	Out of 418	1,156	96	18,221	215
2017	University of Pennsylvania	2	\$41,387	111	\$38,194	105	Pennsylvania	R1	8	7	7	2,172	60	23,985	122
2017	Cornell University	2	\$128,977	241	\$126,447	238	New York	R1	11	11	11	1,843	96	16,202	211
2017	Washington University, St. Louis	2	\$18,745	81	\$17,171	79	Missouri	R1	26	28	19	455	12	6,696	45
2017	Rockefeller University	2	\$556	4	\$556	4	New York	R1	60	90	35	141	24	1,716	32
2017	DePaul University	2	\$83	1	\$83	1	Illinois	R2	214	175	190	29	3	829	20
2017	Georgetown University	2	\$8,762	25	\$5,871	22	Washington D.C.	R1	102	92	98	164	8	4,307	22
2017	University of Notre Dame	2	\$27,517	114	\$25,502	109	Indiana	R1	87	78	100	686	86	3,862	130
2017	Drexel University	2	\$17,811	67	\$12,606	57	Pennsylvania	R1	101	94	96	294	9	3,369	62
2017	Syracuse University	2	\$16,209	65	\$11,739	60	New York	R1	155	116	164	362	35	2,701	72
2017	University of Dayton	2	\$2,289	10	\$2,070	9	Ohio	R2	197	181	162	254	6	3,312	41
2017	Columbia University	2	\$86,862	234	\$86,309	233	New York	R1	13	8	14	2,550	81	27,733	122
2017	Rochester Institute of Technology	2	\$7,815	41	\$5,117	33	New York	R1	180	163	165	474	105	2,497	151
2017	Lehigh University	2	\$13,218	59	\$13,218	59	Pennsylvania	R2	157	137	146	213	15	1,073	21
2017	Southern Methodist University	2	\$5,089	25	\$3,971	24	Texas	R2	186	151	172	167	65	927	104
2017	University of Southern California	2	\$1,109	7	\$1,109	7	California	R1	27	26	27	2,664	81	19,122	122
2017	Brown University	2	\$3,341	11	\$1,433	9	Rhode Island	R2	61	52	77	11,917	135	130,739	204
2017	University of Chicago	2	\$57,641	154	\$51,263	148	Illinois	R1	33	29	34	2,208	138	28,805	215
2017	Florida Institute of Technology	2	\$2,089	11	\$2,089	11	Florida	R2	219	219	184	914	105	5,541	153
2017	Yale University	2	\$1,281	6	\$1,281	6	Connecticut	R1	15	12	15	1,088	67	16,622	123
2017	Catholic University of America	2	\$804	10	\$804	10	Washington D.C.	R2	215	190	176	166	61	2,236	79
2017	Vanderbilt University	2	\$730	4	\$610	3	Tennessee	R1	30	30	23	839	85	8,490	132
2017	American University	2	\$1,243	9	\$1,243	9	Washington D.C.	R2	215	167	195	30,463	46	343,289	105
2017	George Washington University	2	\$1,428	8	\$1,128	7	Washington D.C.	R1	104	84	114	749	126	8,436	197
2017	Texas Christian University	2	\$1,405	7	\$1,405	7	Texas	R2	177	177	149	184	53	1,826	76
2017	Thomas Jefferson University	2	\$137	3	\$137	3	Pennsylvania	R2	94	96	83	143	14	3,922	57
2017	University of San Diego	2	\$1,352	7	\$379	4	California	R2	219	199	168	1,691	91	14,798	131
2017	Marquette University	2	\$1,263	9	\$1,263	9	Wisconsin	R2	185	167	162	129	15	1,456	37
2017	Illinois Institute of Technology	2	\$1,213	6	\$1,213	6	Illinois	R2	151	126	146	936	138	4,675	215
2017	Howard University	2	\$2,312	15	\$1,064	9	Washington D.C.	R2	194	191	145	3,021	133	33,510	195
2017	Case Western Reserve University	2	\$464	3	\$464	3	Ohio	R1	48	58	41	385	10	5,107	45
2017	Seton Hall University	2	\$320	2	\$274	2	New Jersey	R2	237	216	172	21	2	560	19
2017	Claremont Graduate University	2	\$399	4	\$399	4	California	R2	245	187	188	11	2	285	11
2017	Teacher's College, Columbia University	2	\$1,748	2	\$346	1	New York	R2	13	8	14	46	3	1,011	15
2017	University of Denver	2	\$367	4	\$117	2	Colorado	R2	184	148	179	391	6	6,193	53
2017	Tulane University	2	\$375	3	\$350	2	Louisiana	R1	107	109	95	186	8	2,196	50
2017	University of Miami	2	\$323	4	\$323	4	Florida	R2	40	56	49	716	83	9,120	126
2017	Loyola University of Chicago	2	\$2,147	9	\$1,459	7	Illinois	R2	137	140	131	166	105	1,414	163
2017	Clark University	2	\$300	2	\$300	2	Massachusetts	R2	195	151	183	6,144	137	63,631	206
2017	California Institute of Technology	2	\$3,141	5	\$508	2	California	R1	35	34	38	3,207	138	17,535	215
2017	Rensselaer Polytechnic Institute	2	\$170	1	\$170	1	New York	R1	112	109	93	313	11	1,271	69
2017	Duke University	2	\$681	3	\$469	2	Georgia	R1	14	13	13	1,894	66	18,907	104
2017	The New School University	2	\$1,044	7	\$1,044	7	New York	R2	227	185	194	8,887	125	147,838	182
2017	Tufts University	2	\$14,899	58	\$12,127	53	Massachusetts	R1	68	70	56	407	59	4,129	96
2017	Princeton University	2	\$271	2	\$271	2	New Jersey	R1	46	35	74	2,561	86	18,679	130
2017	Hampton University	2	\$112	4	\$85	3	Virginia	R2	259	214	194	442	7	4,264	16
2017	Stanford University	2	\$81,493	203	\$70,578	200	California	R1	2	2	3	2,729	81	24,743	122
2017	Harvard University	2	\$3,341	5	\$2,369	4	Massachusetts	R1	1	1	1	2,269	62	33,866	105
2017	Wake Forest University	2	\$373	4	\$373	4	North Carolina	R1	81	91	66	217	9	2,732	63
2017	Carnegie Mellon University	2	\$2,241	14	\$2,137	13	Pennsylvania	R2	58	42	89	1,131	97	4,107	158

Fiscal Year	Name of Institution	Type of Institution	Total		Research Support		State	Type of Institution	Overall Rank	Research Rank	Innovation Rank	Publications			
		Private or Public	Amt \$k.	Cut	Amt \$k.	Cut		R1 or R2	Out of 418	Out of 418	Out of 418	# of Papers per year (US & NSF)	Top # of Papers per Author (US & NSF)	# of Papers per Year (US)	Top # of Papers per Top Author (US)
2017	Iowa State University	1	\$32,439	115	\$30,466	107	Iowa	R1	71	60	75	1,216	138	12,127	214
2017	University of California, Los Angeles	1	\$66,162	203	\$60,960	195	California	R1	6	6	5	2,008	100	17,667	147
2017	University of California, Davis	1	\$41,874	127	\$39,481	125	California	R1	22	23	25	2,953	117	22,679	171
2017	Louisiana Tech University	1	\$426	3	\$426	3	Louisiana	R2	217	186	176	141	81	683	122
2017	New York University	1	\$37,969	127	\$29,332	118	New York	R1	24	21	29	7,123	138	94,119	215
2017	University of Missouri - St. Louis	1	\$17,815	88	\$16,122	84	Missouri	R2	172	172	132	118	9	1,133	14
2017	Georgia State University	1	\$32,011	119	\$26,046	112	Georgia	R1	124	111	126	1,917	136	16,014	212
2017	Florida International University	1	\$20,239	52	\$15,196	43	Florida	R1	121	107	136	2,055	105	19,132	150
2017	University of Alabama, Huntsville	1	\$9,768	23	\$7,606	21	Alabama	R2	209	182	175	81	14	581	21
2017	University of Texas, Arlington	1	\$8,596	44	\$8,221	41	Texas	R1	132	120	130	295	61	1,693	100
2017	South Dakota State University	1	\$5,163	4	\$5,163	4	South Dakota	R2	174	171	137	226	11	2,337	27
2017	Utah State University	1	\$11,068	45	\$9,628	35	Utah	R2	145	114	148	1,185	72	10,571	92
2017	University of Massachusetts, Boston	1	\$7,050	13	\$1,381	8	Massachusetts	R2	197	154	184	473	138	8,857	214
2017	Brigham Young University	1	\$8,212	43	\$6,894	39	Utah	R2	129	113	133	234	12	4,211	31
2017	University of Massachusetts, Lowell	1	\$7,552	32	\$7,506	31	Massachusetts	R2	176	170	157	129	9	954	24
2017	Boston College	1	\$6,309	36	\$4,842	34	Massachusetts	R1	115	117	110	646	138	14,821	214
2017	University of Maryland, Baltimore County	1	\$10,371	42	\$7,488	39	Maryland	R2	156	142	135	174	18	1,266	24
2017	Wayne State University	1	\$1,350	4	\$510	2	Michigan	R1	75	71	70	887	128	8,574	186
2017	University of Massachusetts, Dartmouth	1	\$1,645	11	\$1,488	10	Massachusetts	R2	205	175	171	97	11	635	31
2017	Florida Atlantic University	1	\$1,693	8	\$1,082	6	Florida	R2	177	157	173	466	13	3,495	32
2017	University of South Florida	1	\$669	6	\$444	5	Florida	R1	81	75	82	1,098	105	9,995	153
2017	Montclair State University	1	\$4,729	13	\$1,935	9	New Jersey	R2	226	194	179	52	25	465	30
2017	University of California, Riverside	1	\$1,262	5	\$1,262	5	California	R2	89	73	97	707	86	2,912	132
2017	Illinois State University	1	\$452	3	\$452	3	Illinois	R2	206	182	170	2,712	138	21,874	215
2017	University of Texas, Austin	1	\$111,569	249	\$109,015	245	Texas	R1	28	22	36	1,577	77	9,584	122
2017	Pennsylvania State University	1	\$2,194	6	\$628	4	Pennsylvania	R1	29	18	42	2,330	81	23,990	122
2017	University of Wyoming	1	\$3,827	19	\$3,631	17	Wyoming	R2	146	131	152	456	8	2,766	36
2017	University of Central Florida	1	\$12,114	57	\$10,894	53	Florida	R1	96	93	87	964	91	8,569	136
2017	University of Pittsburgh	1	\$7,642	29	\$4,220	23	Pennsylvania	R2	20	24	21	1,654	138	14,283	215
2017	University of South Alabama	1	\$690	3	\$43	1	Alabama	R2	178	181	138	250	93	3,002	136
2017	Texas A&M University	1	\$1,933	11	\$825	4	Texas	R1	130	154	97	4,786	138	48,402	215
2017	University of Cincinnati	1	\$6,905	47	\$6,309	43	Ohio	R1	72	64	69	358	46	6,058	90
2017	Central Michigan University	1	\$1,989	4	\$240	1	Michigan	R2	223	194	176	583	12	7,054	67
2017	Florida A&M University	1	\$6,113	7	\$493	2	Florida	R2	211	202	154	3,261	105	30,016	153
2017	Virginia Polytechnic Institute and State University	1	\$54,772	169	\$42,617	155	Virginia	R1	62	49	79	220	13	1,455	30
2017	Bowling Green State University	1	\$251	2	\$159	1	Ohio	R2	202	171	171	178	7	2,006	23
2017	Arizona State University	1	\$17,475	66	\$15,891	61	Arizona	R1	50	41	63	2,478	66	17,092	106
2017	University of Iowa	1	\$8,802	44	\$7,729	41	Iowa	R1	55	50	55	1,216	138	12,127	214
2017	Ohio State University	1	\$2,720	6	\$540	2	Ohio	R1	21	19	28	1,558	138	15,672	215
2017	East Tennessee State University	1	\$1,433	10	\$1,026	6	Tennessee	R2	212	189	167	184	83	1,455	123
2017	University of California, Berkeley	1	\$106,022	234	\$67,117	223	California	R1	10	9	12	2,004	67	11,081	123
2017	University of Houston	1	\$352	3	\$352	3	Texas	R1	106	98	98	1,926	105	22,924	156
2017	University of New Orleans	1	\$123	1	\$123	1	Louisiana	R2	198	170	171	312	8	5,065	67
2017	Wright State University	1	\$1,788	4	\$0	0	Ohio	R2	190	162	166	5,782	138	57,463	210
2017	University of North Carolina, Charlotte	1	\$28,072	79	\$24,260	74	North Carolina	R2	159	135	150	144	6	1,546	16
2017	University of Toledo	1	\$863	5	\$709	4	Ohio	R2	147	134	135	578	38	5,912	69
2017	Northern Arizona University	1	\$1,306	4	\$206	1	Arizona	R2	182	168	171	687	59	3,280	95
2017	North Dakota State University	1	\$3,469	13	\$3,363	11	North Dakota	R2	138	148	134	333	8	3,191	48
2017	Kennesaw State University	1	\$14,423	25	\$12,742	23	Georgia	R2	219	183	182	45	12	475	18
2017	University of Florida	1	\$51,804	174	\$45,071	169	Florida	R1	23	25	22	3,250	105	31,176	153

Table 8: 2017 NSF Data

2018 NSF Data																
Fiscal Year	Name of Institution	Type of Institution	Total		Research Support		State	Type of Institution	Overall Rank	Research Rank	Innovation Rank	Publications				
			Public or Private	Amt \$k	Cnt	Amt \$k						Cnt	R1 or R2	Out of 432	Out of 432	Out of 432
2018	Johns Hopkins University		2	\$42,433	121	\$38,064	118	Maryland	R1	4	4	6	1,439	210	24,517	263
2018	University of Pennsylvania		2	\$42,146	109	\$36,854	102	Pennsylvania	R1	9	8	9	2,601	105	25,046	155
2018	Cornell University		2	\$118,941	217	\$106,706	212	New York	R1	11	12	11	2,369	210	16,906	263
2018	Washington University, St. Louis		2	\$20,388	86	\$19,547	84	Missouri	R1	31	31	19	508	9	7,150	44
2018	Rockefeller University		2	\$848	4	\$434	3	New York	R1	45	90	5	211	84	1,833	107
2018	DePaul University		2	\$1,369	6	\$301	4	Illinois	R2	210	163	181	50	4	887	21
2018	Georgetown University		2	\$6,429	28	\$6,073	25	Washington D.C.	R1	91	91	90	188	7	4,268	28
2018	University of Notre Dame		2	\$25,682	100	\$24,919	96	Indiana	R1	84	77	79	754	125	3,628	156
2018	Drexel University		2	\$15,052	63	\$11,384	54	Pennsylvania	R1	105	92	92	355	12	3,429	63
2018	Syracuse University		2	\$12,974	61	\$12,584	59	New York	R1	171	116	157	421	45	2,826	60
2018	University of Dayton		2	\$323	2	\$323	2	Ohio	R2	185	174	130	292	8	3,238	22
2018	Columbia University		2	\$88,946	217	\$78,748	215	New York	R1	12	9	18	2,807	105	28,197	154
2018	Rochester Institute of Technology		2	\$11,329	47	\$8,492	35	New York	R1	159	154	133	543	127	2,638	162
2018	Lehigh University		2	\$13,626	57	\$13,085	55	Pennsylvania	R2	168	140	135	263	14	1,153	27
2018	Southern Methodist University		2	\$4,763	22	\$4,258	19	Texas	R2	184	149	163	228	106	1,048	126
2018	University of Southern California		2	\$1,753	7	\$1,753	7	California	R1	26	29	21	3,193	106	19,794	130
2018	Brown University		2	\$1,816	8	\$1,816	8	Rhode Island	R2	62	53	80	13,423	208	134,007	253
2018	University of Chicago		2	\$56,959	139	\$55,633	137	Illinois	R1	33	32	34	2,438	215	28,824	263
2018	Florida Institute of Technology		2	\$839	6	\$762	5	Florida	R2	244	180	186	1,124	140	6,083	170
2018	Yale University		2	\$785	5	\$785	5	Connecticut	R1	13	13	21	1,290	101	16,377	160
2018	Catholic University of America		2	\$2,503	10	\$2,503	10	Washington D.C.	R2	240	183	169	212	118	1,988	147
2018	Vanderbilt University		2	\$130	2	\$130	2	Tennessee	R2	34	33	20	911	126	8,667	158
2018	American University		2	\$1,368	8	\$1,368	8	Washington D.C.	R2	199	151	190	33,867	68	348,860	128
2018	George Washington University		2	\$2,555	10	\$1,335	6	Washington D.C.	R1	91	78	116	876	214	8,480	261
2018	Texas Christian University		2	\$512	4	\$512	4	Texas	R2	197	170	138	227	79	1,881	99
2018	Thomas Jefferson University		2	\$117	2	\$71	1	Pennsylvania	R2	109	98	69	146	15	4,076	50
2018	University of San Diego		2	\$1,414	11	\$1,126	8	California	R2	219	187	154	1,944	122	15,168	152
2018	Marquette University		2	\$5,304	9	\$5,304	9	Wisconsin	R2	190	157	151	184	19	1,557	40
2018	Illinois Institute of Technology		2	\$1,555	6	\$1,555	6	Illinois	R2	139	128	112	1,156	215	4,766	263
2018	Howard University		2	\$10,012	25	\$5,577	16	Washington D.C.	R2	192	181	128	3,532	205	86,515	248
2018	Case Western Reserve University		2	\$493	3	\$493	3	Ohio	R1	57	56	36	440	18	5,208	32
2018	Seton Hall University		2	\$2,071	7	\$1,887	6	New Jersey	R2	243	206	162	30	4	548	22
2018	Claremont Graduate University		2	\$762	2	\$115	1	California	R2	253	179	192	21	3	289	9
2018	Teachers College, Columbia University		2	\$2,698	4	\$447	1	New York	R2	12	9	18	54	3	1,048	13
2018	University of Denver		2	\$553	5	\$553	5	Colorado	R2	190	142	178	447	7	6,541	48
2018	Tulane University		2	\$1,387	8	\$1,387	8	Louisiana	R1	113	108	82	198	16	2,150	42
2018	University of Miami		2	\$132	2	\$82	2	Florida	R2	60	58	47	888	118	9,452	148
2018	Loyola University of Chicago		2	\$1,113	8	\$836	6	Illinois	R2	143	135	106	242	181	1,522	219
2018	Clark University		2	\$356	2	\$356	2	Massachusetts	R2	198	146	171	7,150	215	66,590	258
2018	California Institute of Technology		2	\$1,381	2	\$0	0	California	R1	37	36	32	3,675	215	18,408	263
2018	Rensselaer Polytechnic Institute		2	\$1,355	2	\$0	0	New York	R1	95	111	53	323	11	1,257	46
2018	Duke University		2	\$1,649	4	\$500	1	Georgia	R1	15	15	14	2,297	101	19,212	121
2018	The New School University		2	\$1,610	9	\$1,610	9	New York	R2	229	172	191	10,686	202	154,902	239
2018	Tufts University		2	\$11,598	60	\$9,089	55	Massachusetts	R1	63	71	46	502	101	4,141	120
2018	Princeton University		2	\$22	2	\$22	2	New Jersey	R1	38	37	71	3,161	125	17,899	156
2018	Hampton University		2	\$50	1	\$50	1	Virginia	R2	270	198	192	453	7	4,201	17
2018	Stanford University		2	\$67,708	176	\$54,463	171	California	R1	1	1	4	3,017	105	25,224	123
2018	Harvard University		2	\$984	5	\$984	5	Massachusetts	R1	2	2	2	2,507	101	34,387	128
2018	Wake Forest University		2	\$521	4	\$521	4	North Carolina	R2	92	92	53	250	8	2,926	45
2018	Carnegie Mellon University		2	\$1,451	8	\$1,451	8	Pennsylvania	R1	41	43	63	1,086	122	4,146	181

Fiscal Year	Name of Institution	Type of Institution	Total		Research Support		State	Type of Institution	Overall Rank	Research Rank	Innovation Rank	Publications			
		Private or Public	Amt \$k	Cnt	Amt \$k	Cnt		R1 or R2	Out of 432	Out of 432	Out of 432	# of Papers per year (US & NSF)	Top # of Papers per Author (US & NSF)	# of Papers per Year (US)	Top # of Papers per Top Author (US)
2018	Iowa State University		\$33,715	109	\$31,108	106	Iowa	R1	68	63	74	1,399	215	12,151	263
2018	University of California, Los Angeles		\$65,335	203	\$58,362	199	California	R1	7	6	10	2,439	126	18,526	163
2018	University of California, Davis		\$52,760	159	\$46,857	153	California	R1	27	26	28	3,402	213	23,477	258
2018	Louisiana Tech University		\$1,427	4	\$115	3	Louisiana	R2	218	174	155	196	105	737	123
2018	New York University		\$35,517	127	\$32,169	119	New York	R1	20	20	30	8,170	215	93,224	263
2018	University of Missouri - St. Louis		\$21,978	96	\$19,859	91	Missouri	R2	149	165	108	111	9	1,078	14
2018	Georgia State University		\$43,678	122	\$36,141	116	Georgia	R1	123	174	125	2,293	209	16,460	257
2018	Florida International University		\$17,771	57	\$12,832	52	Florida	R1	123	104	119	2,416	128	20,084	157
2018	University of Alabama, Huntsville		\$12,992	17	\$10,217	13	Alabama	R2	214	169	163	100	7	651	30
2018	University of Texas, Arlington		\$7,938	39	\$5,397	35	Texas	R1	117	117	120	332	99	1,696	123
2018	South Dakota State University		\$4,919	5	\$4,671	4	South Dakota	R2	153	155	90	281	12	2,449	30
2018	Utah State University		\$11,254	41	\$5,891	33	Utah	R2	132	114	134	1,324	109	10,713	130
2018	University of Massachusetts, Boston		\$5,060	13	\$2,607	11	Massachusetts	R2	205	147	180	605	215	9,235	263
2018	Brigham Young University		\$10,674	29	\$10,361	26	Utah	R2	114	112	110	278	12	4,532	49
2018	University of Massachusetts, Lowell		\$3,495	21	\$3,403	20	Massachusetts	R2	176	157	126	141	5	1,001	31
2018	Boston College		\$8,181	33	\$4,610	29	Massachusetts	R1	116	120	94	787	215	15,018	263
2018	University of Maryland, Baltimore County		\$13,766	43	\$6,469	35	Maryland	R2	143	134	117	171	12	1,221	23
2018	Wayne State University		\$1,946	4	\$351	2	Michigan	R1	80	73	61	983	196	8,693	238
2018	University of Massachusetts, Dartmouth		\$1,961	15	\$1,804	14	Massachusetts	R2	201	163	152	91	8	600	25
2018	Florida Atlantic University		\$1,307	6	\$1,307	6	Florida	R2	198	147	174	576	12	3,544	20
2018	University of South Florida		\$269	3	\$269	3	Florida	R1	75	78	62	1,309	140	10,228	170
2018	Montclair State University		\$2,303	13	\$1,108	9	New Jersey	R2	231	181	170	49	10	459	15
2018	University of California, Riverside		\$2,027	6	\$1,027	5	California	R2	82	74	81	817	126	3,166	163
2018	Illinois State University		\$235	3	\$235	3	Illinois	R2	216	176	160	3,116	215	21,388	263
2018	University of Texas, Austin		\$142,143	213	\$135,052	206	Texas	R1	27	24	35	1,675	118	9,802	159
2018	Pennsylvania State University		\$1,399	7	\$1,338	6	Pennsylvania	R1	25	22	60	2,612	105	25,072	155
2018	University of Wyoming		\$2,838	13	\$2,289	11	Wyoming	R2	177	130	167	481	10	2,819	51
2018	University of Central Florida		\$25,811	77	\$22,257	71	Florida	R1	102	92	77	1,268	139	12,209	169
2018	University of Pittsburgh		\$5,646	25	\$4,638	22	Pennsylvania	R2	28	27	22	1,717	215	14,785	263
2018	University of South Alabama		\$910	3	\$209	2	Alabama	R2	178	168	100	315	125	3,063	156
2018	Texas A&M University		\$3,005	10	\$2,030	6	Texas	R1	123	142	50	5,273	215	49,141	263
2018	University of Cincinnati		\$9,871	44	\$6,676	38	Ohio	R1	76	68	72	389	71	6,216	85
2018	Central Michigan University		\$899	2	\$500	1	Michigan	R2	232	178	175	700	33	5,341	115
2018	Florida A&M University		\$3,794	7	\$1,815	3	Florida	R2	228	200	138	3,770	140	31,093	170
2018	Virginia Polytechnic Institute and State University		\$49,352	162	\$46,499	155	Virginia	R1	12	50	86	304	89	1,668	101
2018	Bowling Green State University		\$292	3	\$292	3	Ohio	R2	193	167	150	171	5	2,030	21
2018	Arizona State University		\$19,630	73	\$16,818	70	Arizona	R1	47	44	73	2,803	103	17,748	154
2018	University of Iowa		\$10,610	43	\$9,171	42	Iowa	R1	55	52	57	1,401	215	15,666	263
2018	Ohio State University		\$6,472	11	\$3,393	6	Ohio	R1	24	21	33	1,807	215	15,857	263
2018	East Tennessee State University		\$2,966	11	\$1,721	8	Tennessee	R2	212	181	148	242	118	1,495	147
2018	University of California, Berkeley		\$109,432	233	\$102,164	224	California	R1	8	10	13	2,311	103	10,915	158
2018	University of Houston		\$424	3	\$340	2	Texas	R1	99	93	84	2,244	127	23,592	184
2018	University of New Orleans		\$2,353	4	\$437	3	Louisiana	R2	204	164	150	366	16	5,057	77
2018	Wright State University		\$2,029	5	\$366	1	Ohio	R2	199	155	161	6,657	213	60,765	260
2018	University of North Carolina, Charlotte		\$21,701	86	\$20,044	83	North Carolina	R2	154	126	130	199	9	1,648	24
2018	University of Toledo		\$3,424	11	\$509	7	Ohio	R2	155	132	119	706	56	6,388	66
2018	Northern Arizona University		\$653	3	\$178	1	Arizona	R2	185	155	154	830	99	3,513	119
2018	North Dakota State University		\$9,615	19	\$5,008	17	North Dakota	R2	159	142	115	370	10	3,213	32
2018	Kennesaw State University		\$14,972	28	\$14,972	28	Georgia	R2	236	183	177	70	26	546	27
2018	University of Florida		\$37,892	169	\$33,655	163	Florida	R1	30	28	33	3,792	140	32,072	170

Table 9: 2018 NSF Data

2019 NSF Data															
Fiscal Year	Name of Institution	Type of Institution	Total		Research Support		State	Type of Institution	Overall Rank	Research Rank	Innovation Rank	Publications			
			Public or Private	Amt \$k	Cnt	Amt \$k						Cnt	Out of 477	Out of 477	Out of 477
2019	Johns Hopkins University	2	\$38,294	83	\$35,846	81	Maryland	R1	5	5	6	1,365	159	24,736	234
2019	University of Pennsylvania	2	\$62,017	80	\$60,078	74	Pennsylvania	R1	8	9	9	2,580	84	25,554	161
2019	Cornell University	2	\$87,950	127	\$83,732	121	New York	R1	13	14	12	2,246	158	16,587	218
2019	Washington University, St. Louis	2	\$20,229	51	\$19,728	50	Missouri	R1	29	30	23	525	9	6,906	45
2019	Rockefeller University	2	\$1,250	6	\$1,250	6	New York	R1	44	66	8	119	10	1,726	41
2019	DePaul University	2	\$357	5	\$331	4	Illinois	R2	243	194	191	40	5	763	22
2019	Georgetown University	2	\$8,970	20	\$6,057	16	Washington D.C.	R1	96	98	97	184	6	4,082	32
2019	University of Notre Dame	2	\$34,805	59	\$32,357	55	Indiana	R1	93	92	90	682	94	3,369	121
2019	Drexel University	2	\$13,804	37	\$9,963	32	Pennsylvania	R1	105	105	91	255	13	3,411	64
2019	Syracuse University	2	\$11,633	37	\$11,633	37	New York	R1	166	132	163	394	30	2,724	53
2019	University of Dayton	2	\$519	1	\$519	1	Ohio	R2	224	209	148	244	8	3,085	23
2019	Columbia University	2	\$88,544	133	\$86,389	131	New York	R1	10	10	17	2,797	85	28,521	161
2019	Rochester Institute of Technology	2	\$12,032	30	\$4,882	23	New York	R1	183	183	135	534	106	2,731	143
2019	Lehigh University	2	\$11,807	40	\$11,577	40	Pennsylvania	R2	186	164	152	248	22	1,085	25
2019	Southern Methodist University	2	\$5,443	19	\$2,415	15	Texas	R2	197	158	187	181	72	1,028	103
2019	University of Southern California	2	\$1,638	9	\$1,638	9	California	R1	26	29	20	2,892	84	19,746	120
2019	Brown University	2	\$2,814	5	\$2,814	4	Rhode Island	R2	64	52	95	13,023	160	135,959	250
2019	University of Chicago	2	\$52,956	78	\$48,625	77	Illinois	R1	26	23	42	2,395	161	28,719	252
2019	Florida Institute of Technology	2	\$1,249	6	\$1,234	5	Florida	R2	227	184	182	1,168	106	6,370	143
2019	Yale University	2	\$681	3	\$507	3	Connecticut	R1	15	13	22	1,191	76	15,641	155
2019	Catholic University of America	2	\$1,028	7	\$1,028	7	Washington D.C.	R2	233	194	171	158	92	1,686	119
2019	Vanderbilt University	2	\$1,109	5	\$1,059	5	Tennessee	R1	33	31	26	881	96	8,670	162
2019	American University	2	\$1,211	7	\$1,211	7	Washington D.C.	R2	226	178	197	32,046	62	346,295	115
2019	George Washington University	2	\$1,074	7	\$1,074	7	Washington D.C.	R1	98	84	126	783	154	8,098	204
2019	Texas Christian University	2	\$1,036	3	\$996	3	Texas	R2	212	203	139	206	52	1,820	72
2019	Thomas Jefferson University	2	\$1,314	5	\$412	4	Pennsylvania	R2	102	102	78	133	10	3,962	70
2019	University of San Diego	2	\$1,582	6	\$562	4	California	R2	228	204	156	1,830	96	15,471	126
2019	Marquette University	2	\$948	5	\$948	5	Wisconsin	R2	178	155	145	156	9	2,559	35
2019	Illinois Institute of Technology	2	\$350	3	\$302	2	Illinois	R2	143	147	99	1,074	158	4,943	210
2019	Howard University	2	\$4,567	15	\$2,744	9	Washington D.C.	R2	200	176	157	3,224	155	34,262	221
2019	Case Western Reserve University	2	\$1,191	0	\$0	0	Ohio	R1	57	59	45	430	15	5,267	43
2019	Seton Hall University	2	\$7,294	7	\$6,809	6	New Jersey	R2	245	230	146	17	2	469	18
2019	Claremont Graduate University	2	\$1,579	4	\$1,279	3	California	R2	281	201	211	17	5	274	8
2019	Teacher's College, Columbia University	2	\$3,803	3	\$0	0	New York	R2	10	10	17	36	3	993	12
2019	University of Denver	2	\$1,052	6	\$1,052	6	Colorado	R2	193	152	180	432	8	6,077	39
2019	Tulane University	2	\$2,646	3	\$2,618	2	Louisiana	R1	112	107	103	183	12	2,180	42
2019	University of Miami	2	\$36	1	\$36	1	Florida	R2	65	63	59	907	91	9,549	119
2019	Loyola University of Chicago	2	\$2,350	7	\$984	4	Illinois	R2	139	142	117	208	132	1,411	188
2019	Clark University	2	\$440	4	\$440	4	Massachusetts	R2	207	169	148	7,012	159	67,452	238
2019	California Institute of Technology	2	\$1,516	3	\$1,347	2	California	R1	37	35	39	3,434	161	18,893	253
2019	Rensselaer Polytechnic Institute	2	\$1,049	1	\$52	0	New York	R1	117	137	65	312	12	1,316	68
2019	Duke University	2	\$2,168	2	\$125	1	Georgia	R1	16	16	18	2,166	77	18,915	107
2019	The New School University	2	\$1,432	8	\$1,432	8	New York	R2	235	173	200	10,280	114	158,328	202
2019	Tufts University	2	\$13,284	38	\$12,168	33	Massachusetts	R1	71	78	68	474	73	4,082	101
2019	Princeton University	2	\$364	2	\$364	2	New Jersey	R1	46	38	83	2,947	94	16,388	121
2019	Hampton University	2	\$436	4	\$377	3	Virginia	R2	219	164	186	427	6	4,389	20
2019	Stanford University	2	\$76,256	103	\$75,690	101	California	R1	4	3	5	2,994	85	25,026	121
2019	Harvard University	2	\$206	2	\$206	2	Massachusetts	R1	1	1	1	2,383	73	34,469	120
2019	Wake Forest University	2	\$40	1	\$40	1	North Carolina	R2	91	94	70	236	7	2,774	35
2019	Carnegie Mellon University	2	\$1,841	8	\$1,841	8	Pennsylvania	R1	48	47	36	1,115	92	4,255	172



Fiscal Year	Name of Institution	Type of Institution	Total		Research Support		State	Type of Institution	Overall Rank	Research Rank	Innovation Rank	Publications			
		Private or Public	Amt \$k	Cnt	Amt \$k	Cnt		R1 or R2	Out of 477	Out of 477	Out of 477	# of Papers per year (US & NSF)	Top # of Papers per Author (US & NSF)	# of Papers per Year (US)	# of Papers per Top Author (US)
2019	Iowa State University		\$28,427	84	\$24,958	77	Iowa	R1	78	70	96	1,373	158	11,909	210
2019	University of California, Los Angeles		\$58,080	122	\$56,400	118	California	R1	9	8	11	2,229	106	18,558	142
2019	University of California, Davis		\$41,465	78	\$35,399	72	California	R1	25	24	41	3,122	158	24,152	229
2019	Louisiana Tech University		\$958	4	\$706	3	Louisiana	R2	218	175	179	142	83	687	120
2019	New York University		\$45,073	91	\$39,223	84	New York	R1	22	20	35	7,815	159	91,358	237
2019	University of Missouri - St. Louis		\$41,217	62	\$33,652	56	Missouri	R2	197	181	144	139	7	1,432	14
2019	Georgia State University		\$55,970	105	\$53,599	100	Georgia	R1	121	112	121	2,148	157	17,512	217
2019	Florida International University		\$20,219	47	\$17,006	40	Florida	R1	114	110	104	2,640	105	21,405	143
2019	University of Alabama, Huntsville		\$5,797	11	\$4,850	8	Alabama	R2	223	191	166	93	10	736	33
2019	University of Texas, Arlington		\$5,124	27	\$4,884	24	Texas	R1	145	138	126	356	73	1,769	106
2019	South Dakota State University		\$2,845	7	\$1,845	6	South Dakota	R2	164	168	110	276	10	2,461	30
2019	Utah State University		\$7,301	23	\$6,846	17	Utah	R2	136	124	137	1,211	29	10,995	50
2019	University of Massachusetts, Boston		\$3,840	14	\$2,892	12	Massachusetts	R2	201	160	183	625	158	10,064	210
2019	Brigham Young University		\$6,652	21	\$5,211	20	Utah	R2	130	133	112	261	12	4,619	48
2019	University of Massachusetts, Lowell		\$6,967	29	\$6,002	27	Massachusetts	R2	200	177	153	133	6	1,032	17
2019	Boston College		\$7,875	27	\$6,689	26	Massachusetts	R1	135	128	121	775	158	15,492	210
2019	University of Maryland, Baltimore County		\$11,329	31	\$8,451	29	Maryland	R2	150	144	118	186	9	1,265	18
2019	Wayne State University		\$1,844	6	\$614	4	Michigan	R1	77	73	78	923	155	8,387	243
2019	University of Massachusetts, Dartmouth		\$3,994	10	\$1,717	8	Massachusetts	R2	236	184	185	89	9	593	29
2019	Florida Atlantic University		\$480	2	\$480	2	Florida	R2	203	169	175	554	10	3,634	27
2019	University of South Florida		\$871	4	\$743	2	Florida	R1	81	169	67	1,251	106	10,486	143
2019	Montclair State University		\$1,956	7	\$1,055	5	New Jersey	R2	278	205	210	55	15	474	26
2019	University of California, Riverside		\$1,702	4	\$1,702	4	California	R2	85	81	90	753	96	3,108	132
2019	Illinois State University		\$311	1	\$311	1	Illinois	R2	264	204	200	3,167	158	22,341	210
2019	University of Texas, Austin		\$132,901	169	\$123,961	162	Texas	R1	31	27	40	1,570	85	10,025	154
2019	Pennsylvania State University		\$1,658	5	\$549	3	Pennsylvania	R1	27	22	60	2,592	84	25,619	161
2019	University of Wyoming		\$3,255	12	\$3,255	12	Wyoming	R2	165	135	159	453	8	2,754	33
2019	University of Central Florida		\$36,931	58	\$35,483	55	Florida	R1	110	109	88	1,291	105	9,228	132
2019	University of Pittsburgh		\$5,639	23	\$5,417	22	Pennsylvania	R2	23	26	27	1,646	157	14,763	209
2019	University of South Alabama		\$2,953	4	\$680	2	Alabama	R2	172	169	120	300	93	3,119	119
2019	Texas A&M University		\$732	3	\$293	1	Texas	R1	123	127	81	5,256	161	50,253	249
2019	University of Cincinnati		\$6,959	22	\$6,548	21	Ohio	R1	76	72	87	372	49	6,161	70
2019	Central Michigan University		\$1,352	3	\$400	1	Michigan	R2	254	199	193	729	36	5,611	111
2019	Florida A&M University		\$3,215	8	\$972	3	Florida	R2	205	210	117	3,870	106	31,994	143
2019	Virginia Polytechnic Institute and State University		\$50,700	116	\$49,294	112	Virginia	R1	68	61	85	288	108	1,603	137
2019	Bowling Green State University		\$1,154	3	\$1,108	2	Ohio	R2	241	196	185	163	7	2,044	13
2019	Arizona State University		\$19,541	55	\$17,306	49	Arizona	R1	53	44	74	2,626	71	17,663	162
2019	University of Iowa		\$11,060	28	\$8,867	27	Iowa	R1	58	51	79	1,373	158	11,909	210
2019	Ohio State University		\$3,291	7	\$1,991	4	Ohio	R1	24	23	39	1,783	161	16,594	248
2019	East Tennessee State University		\$735	5	\$705	4	Tennessee	R2	220	182	173	206	92	1,342	118
2019	University of California, Berkeley		\$77,395	131	\$68,346	120	California	R1	12	11	14	2,087	76	10,498	154
2019	University of Houston		\$181	1	\$181	1	Texas	R1	103	103	79	2,196	106	23,733	162
2019	University of New Orleans		\$3,057	5	\$287	4	Louisiana	R2	218	193	152	331	11	5,006	78
2019	Wright State University		\$3,927	3	\$50	0	Ohio	R2	194	173	150	6,205	160	61,524	247
2019	University of North Carolina, Charlotte		\$20,058	62	\$13,855	58	North Carolina	R2	157	155	124	211	10	1,770	19
2019	University of Toledo		\$4,688	15	\$4,099	12	Ohio	R2	156	143	132	708	44	6,817	77
2019	Northern Arizona University		\$1,356	3	\$277	1	Arizona	R2	197	161	177	751	70	3,542	99
2019	North Dakota State University		\$4,130	13	\$2,316	10	North Dakota	R2	163	158	125	363	15	3,205	38
2019	Kennesaw State University		\$4,614	11	\$4,614	11	Georgia	R2	261	229	168	60	17	629	23
2019	University of Florida		\$57,566	109	\$52,052	102	Florida	R1	28	28	39	3,908	106	32,956	143

Table 10: 2019 NSF Data

Total Multiple Regression							
Private or Public Institutions (Y)	Research Support		Overall Rank	Research Rank	Innovation Rank	Publications	
	Amount \$k	Count				# of Papers per year (US & NSF)	# of Papers per Top Author (US & NSF)
2	\$39,110	144	4	7	4	179	4
2	\$30,195	135	8	10	9	564	19
2	\$92,791	232	14	12	13	465	9
2	\$15,372	88	28	31	23	104	7
2	\$760	2	51	60	41	15	2
2	\$2,439	7	183	139	190	7	2
2	\$4,299	25	97	95	90	36	5
2	\$23,323	87	87	75	101	120	11
2	\$18,659	66	96	102	81	62	4
2	\$9,575	55	143	113	168	63	9
2	\$338	4	181	181	139	91	5
2	\$86,405	256	11	9	14	664	9
2	\$2,635	16	171	173	137	44	5
2	\$11,770	57	138	131	126	81	9
2	\$1,666	14	176	165	148	28	5
2	\$39,737	145	27	28	24	659	12
2	\$27,071	109	68	61	74	2,469	8
2	\$40,111	121	34	33	40	406	8
2	\$1,186	9	195	172	172	129	6
2	\$26,648	154	18	17	20	237	7
2	\$1,304	8	234	220	165	15	2
2	\$13,144	59	35	39	32	1506	7
2	\$553	5	250	200	213	7,049	12
2	\$5,530	35	119	103	126	103	3
2	\$609	3	225	198	175	18	2
2	\$1,014	4	95	101	79	19	2
2	\$63,613	191	249	218	192	375	7
2	\$2,639	12	195	167	167	28	4
2	\$4,711	34	137	134	121	162	9
2	\$2,777	13	240	236	156	543	8
2	\$13,337	56	50	57	40	74	4
2	\$117	1	264	247	173	1	1
2	\$233	2	240	188	208	4	1
2	\$110	2	11	9	14	17	2
2	\$2,257	20	224	197	175	75	2
2	\$5,835	35	109	98	104	38	2
2	\$3,005	19	74	68	71	217	7
2	\$1,146	8	144	142	126	5	1
2	\$813	9	182	128	212	1,177	8
2	\$71,837	113	29	24	33	534	8
2	\$20,980	80	72	74	63	117	5
2	\$41,046	168	16	16	16	452	7
2	\$502	5	233	186	202	1,640	6
2	\$8,533	45	67	65	64	77	8
2	\$56,927	165	39	29	60	645	10
2	\$1,798	4	289	256	192	57	2

2	\$74,692	220	2	2	2	530	9
2	\$40,369	174	1	1	1	448	9
2	\$2,633	14	91	90	86	35	3
2	\$65,711	209	33	30	39	211	7
1	\$33,161	132	71	67	71	262	7
1	\$71,126	215	5	4	5	546	12
1	\$50,570	200	24	20	27	595	6
1	\$1,193	5	196	218	120	15	4
1	\$23,366	121	31	32	29	1,428	9
1	\$1,812	16	186	147	182	23	4
1	\$5,129	38	147	135	138	435	5
1	\$12,597	49	157	146	145	475	7
1	\$4,543	15	220	187	181	30	6
1	\$7,786	42	124	127	108	65	5
1	\$10,116	13	210	196	157	63	3
1	\$5,071	40	148	127	147	265	10
1	\$2,604	15	194	161	175	58	2
1	\$5,027	37	129	115	122	35	3
1	\$5,303	31	179	184	130	29	3
1	\$3,580	26	121	107	123	84	5
1	\$6,114	34	132	118	133	44	7
1	\$7,285	47	83	77	84	176	9
1	\$722	10	213	188	168	26	3
1	\$2,135	15	158	141	156	121	3
1	\$11,308	76	81	91	61	258	5
1	\$788	11	268	230	201	6	2
1	\$15,638	95	75	66	83	137	4
1	\$971	7	252	213	201	736	10
1	\$50,105	253	30	27	35	340	7
1	\$56,155	294	25	18	34	653	19
1	\$10,974	55	191	158	171	121	3
1	\$5,315	59	92	97	80	238	5
1	\$19,582	129	22	25	21	380	7
1	\$1,418	10	190	191	135	37	2
1	\$1,881	5	149	160	116	1,142	7
1	\$7,669	49	62	63	58	75	3
1	\$701	5	239	224	167	116	2
1	\$333	4	166	147	157	1,188	15
1	\$31,043	179	66	59	70	130	8
1	\$2,794	7	212	174	185	31	4
1	\$35,121	195	56	40	68	613	8
1	\$10,130	67	54	51	56	262	7
1	\$33,721	106	23	21	25	403	8
1	\$2,830	6	236	221	167	35	2
1	\$128,805	330	9	8	11	479	6
1	\$10,444	69	117	109	113	435	8
1	\$2,346	15	127	108	134	94	8
1	\$2,015	16	184	168	13	1,008	6
1	\$6,230	42	160	149	148	14	2
1	\$8,417	23	170	177	131	70	3

1	\$4,614	28	206	176	175	164	5
1	\$11,748	28	185	176	145	102	3
1	\$683	4	271	231	205	4	2
1	\$31,803	170	21	23	22	873	12
2	\$36,212	135	6	7	4	397	52
2	\$32,701	136	8	9	8	784	35
2	\$104,421	230	14	12	14	772	46
2	\$11,650	75	26	29	22	141	6
2	\$1,081	4	52	66	41	66	33
2	\$1,094	3	170	138	191	23	3
2	\$4,237	21	92	98	90	69	7
2	\$21,056	88	89	99	99	260	57
2	\$10,850	64	92	102	84	94	4
2	\$11,605	60	135	114	166	129	15
2	\$449	4	169	169	133	121	5
2	\$75,262	243	11	10	15	948	78
2	\$3,858	27	172	171	143	169	57
2	\$9,187	55	130	130	130	99	11
2	\$2,883	20	177	167	153	122	78
2	\$1,766	10	28	30	25	905	78
2	\$1,137	7	66	60	76	3,861	78
2	\$48,394	125	35	34	40	699	63
2	\$726	11	206	195	171	249	57
2	\$776	5	18	18	20	478	9
2	\$2,054	13	218	210	169	26	3
2	\$802	5	33	40	31	258	30
2	\$2,606	13	237	198	210	10,739	57
2	\$517	7	111	107	123	184	37
2	\$650	9	210	196	172	27	3
2	\$482	3	90	103	77	50	4
2	\$1,720	6	232	203	197	598	30
2	\$593	6	186	167	170	41	5
2	\$765	7	123	120	128	322	63
2	\$497	5	231	239	161	898	51
2	\$566	4	48	56	38	131	7
2	\$380	2	259	245	184	5	1
2	\$756	2	223	189	196	7	2
2	\$107	1	11	10	15	11	3
2	\$376	2	206	187	178	111	4
2	\$410	3	104	106	104	51	4
2	\$212	1	68	69	70	299	30
2	\$1,586	10	138	143	123	11	2
2	\$267	4	175	132	209	1,924	78
2	\$742	4	31	28	36	959	78
2	\$541	4	72	78	68	166	9
2	\$405	1	15	17	13	701	35
2	\$458	5	227	188	209	2,304	54
2	\$6,041	38	63	68	62	153	34
2	\$119	2	40	31	63	1,053	57
2	\$38	1	199	199	199	114	32

2	\$53,847	189	2	2	2	804	53
2	\$45	1	1	1	1	784	53
2	\$216	3	85	96	83	55	6
2	\$1,458	10	34	32	44	307	36
1	\$37,576	117	69	65	65	521	78
1	\$67,480	223	5	4	5	673	34
1	\$40,690	178	24	21	27	987	57
1	\$1,349	5	193	222	128	71	47
1	\$20,047	114	30	33	29	2,168	78
1	\$15,615	86	169	144	175	37	4
1	\$17,648	58	143	135	142	634	59
1	\$13,286	48	147	140	146	627	32
1	\$1,843	16	203	178	184	35	5
1	\$6,042	57	114	125	108	136	59
1	\$6,296	12	202	194	165	96	4
1	\$5,207	29	137	128	145	382	10
1	\$2,269	15	184	165	169	162	60
1	\$7,513	32	126	122	127	52	7
1	\$2,731	20	174	190	125	48	9
1	\$3,431	27	120	113	129	219	63
1	\$4,307	19	133	126	141	59	7
1	\$336	1	79	80	87	394	61
1	\$1,700	10	195	182	170	35	4
1	\$1,081	8	154	140	164	163	4
1	\$1,980	8	78	94	65	409	57
1	\$776	8	250	226	196	5	1
1	\$703	6	70	67	82	269	58
1	\$165	4	236	205	200	1,053	63
1	\$86,575	242	29	26	35	587	54
1	\$1,236	7	27	19	33	479	35
1	\$3,008	18	167	147	171	168	6
1	\$9,009	65	89	97	85	330	31
1	\$6,485	23	20	25	18	538	63
1	\$62	2	180	193	133	108	25
1	\$1,293	5	131	152	109	1,643	78
1	\$8,235	45	60	64	56	159	23
1	\$500	1	225	221	169	202	7
1	\$161	3	197	197	154	1,580	69
1	\$34,894	186	64	61	69	139	8
1	\$201	1	196	168	185	31	2
1	\$13,512	68	49	44	65	889	59
1	\$12,270	66	55	53	59	521	78
1	\$609	3	21	22	24	590	63
1	\$1,021	8	227	223	172	69	31
1	\$100,264	287	10	8	12	745	53
1	\$634	6	114	114	114	653	58
1	\$120	1	121	111	135	99	5
1	\$16	1	179	174	149	1,801	74
1	\$11,837	57	152	147	149	47	4
1	\$0	0	164	175	128	163	8

1	\$0	0	198	177	178	251	59
1	\$2,980	21	173	167	147	53	6
1	\$12,909	25	253	227	199	10	6
1	\$33,286	176	23	24	23	1,220	58
2	\$32,678	132	6	5	4	546	86
2	\$28,462	128	8	9	8	914	96
2	\$107,260	222	14	13	13	826	76
2	\$14,445	80	26	28	21	145	8
2	\$478	2	57	71	38	82	54
2	\$0	0	189	144	181	16	2
2	\$5,893	26	97	97	85	58	7
2	\$21,272	74	91	79	96	310	56
2	\$10,101	62	99	104	83	104	11
2	\$12,783	72	147	116	163	174	31
2	\$694	5	186	175	137	121	4
2	\$86,909	241	12	10	15	1,045	103
2	\$6,082	36	134	180	143	225	57
2	\$7,017	50	140	126	132	68	5
2	\$1,759	19	184	158	151	165	109
2	\$598	7	28	27	24	970	109
2	\$662	6	66	53	75	4,263	112
2	\$44,911	138	34	32	37	875	113
2	\$2,395	14	205	180	154	273	57
2	\$474	3	17	17	17	505	89
2	\$1,118	11	222	209	153	34	4
2	\$624	5	32	38	28	301	24
2	\$877	9	233	181	197	11,732	55
2	\$1,241	13	119	109	121	257	94
2	\$429	7	217	188	165	27	3
2	\$319	2	90	101	71	45	5
2	\$1,431	3	250	214	181	639	26
2	\$2,051	7	195	169	154	51	5
2	\$302	2	122	116	115	375	113
2	\$3,653	13	233	227	149	1,090	88
2	\$649	6	50	55	35	149	17
2	\$521	4	271	236	183	6	1
2	\$664	4	226	176	191	10	3
2	\$406	2	12	10	15	179	16
2	\$462	3	211	173	171	111	4
2	\$601	4	114	111	103	50	4
2	\$35	1	69	63	63	287	26
2	\$1,082	8	132	136	110	19	2
2	\$504	3	180	128	198	2,285	113
2	\$189	2	33	30	36	1,124	113
2	\$386	3	85	86	68	165	8
2	\$405	1	15	16	14	870	90
2	\$455	5	240	189	195	2,798	84
2	\$8,675	45	64	65	55	198	89
2	\$78	2	42	31	60	1,189	56
2	\$0	0	288	250	190	148	60

2	\$63,016	223	2	2	2	938	84
2	\$813	4	1	1	1	893	89
2	\$240	2	85	95	69	74	7
2	\$1,287	9	37	33	43	374	54
1	\$31,216	130	72	61	74	581	111
1	\$55,256	207	5	4	5	727	55
1	\$45,922	186	22	20	27	1,139	62
1	\$556	5	214	222	130	103	70
1	\$22,738	93	30	29	30	2,503	113
1	\$12,488	77	177	143	164	33	4
1	\$15,551	65	148	135	135	705	83
1	\$8,147	39	146	130	141	685	28
1	\$4,222	25	220	180	180	34	6
1	\$6,389	45	117	121	101	186	86
1	\$9,457	14	205	186	148	72	3
1	\$11,613	33	139	123	137	388	11
1	\$1,581	13	199	165	161	217	83
1	\$7,534	35	137	125	131	60	5
1	\$3,777	22	174	185	113	48	6
1	\$3,920	24	126	115	125	284	87
1	\$5,377	27	146	133	135	68	7
1	\$285	3	81	78	78	494	103
1	\$3,006	17	217	182	171	35	5
1	\$862	6	171	147	154	156	4
1	\$0	0	77	92	57	436	57
1	\$1,544	10	243	212	176	8	1
1	\$1,204	9	75	66	80	253	56
1	\$457	7	231	187	186	1,164	113
1	\$86,021	258	29	25	34	669	90
1	\$807	6	33	33	33	912	90
1	\$3,145	17	175	139	166	180	8
1	\$10,246	63	88	91	77	362	44
1	\$3,431	22	20	24	18	630	113
1	\$833	3	180	185	121	114	48
1	\$344	3	124	144	98	1,825	113
1	\$8,725	47	63	62	51	197	37
1	\$500	1	240	219	165	236	24
1	\$359	3	212	200	147	1,923	77
1	\$34,267	182	65	59	66	152	18
1	\$788	4	205	167	167	39	2
1	\$19,889	81	51	42	56	997	86
1	\$11,075	58	62	50	58	581	111
1	\$83	1	21	21	22	694	113
1	\$1,652	12	225	209	157	65	24
1	\$419	6	10	8	12	895	89
1	\$632	5	112	108	106	680	51
1	\$67	1	145	132	137	112	4
1	\$0	0	185	164	146	2,096	113
1	\$15,165	75	152	139	140	73	4
1	\$950	3	162	166	119	197	32

1	\$498	2	209	179	163	284	86
1	\$4,773	26	169	158	134	48	5
1	\$4,219	24	249	206	188	5	1
1	\$35,470	180	24	23	23	1,304	57
2	\$39,276	124	6	5	5	740	66
2	\$35,520	121	9	9	9	1,441	49
2	\$111,810	210	14	12	14	1,222	38
2	\$18,061	80	25	29	17	279	10
2	\$422	2	60	77	41	111	45
2	\$350	3	183	141	184	29	6
2	\$5,067	25	93	91	84	116	7
2	\$20,767	85	94	79	95	441	46
2	\$9,456	59	104	100	93	193	10
2	\$13,479	67	144	116	162	244	35
2	\$1,058	6	172	169	134	189	9
2	\$79,246	224	12	10	15	1,721	49
2	\$4,964	30	189	173	155	229	97
2	\$9,321	44	138	124	134	136	13
2	\$2,242	16	177	156	156	119	59
2	\$443	6	28	30	26	1,720	59
2	\$670	6	68	51	80	7,193	79
2	\$43,354	135	31	31	31	1,162	79
2	\$2,233	13	185	173	149	383	56
2	\$1,025	5	16	17	16	687	49
2	\$1,626	13	211	194	159	47	7
2	\$343	4	31	35	28	462	33
2	\$369	6	214	170	193	19,316	35
2	\$1,146	12	113	102	117	346	64
2	\$369	6	201	177	165	65	5
2	\$199	5	88	96	69	58	4
2	\$1,220	8	229	198	136	1,160	32
2	\$1,265	9	191	170	161	64	4
2	\$824	6	125	113	123	431	79
2	\$1,270	6	209	205	147	1,746	68
2	\$1,250	8	49	55	39	222	11
2	\$477	3	248	212	184	4	1
2	\$1,095	4	216	176	189	12	2
2	\$655	2	12	10	15	34	9
2	\$596	3	52	52	44	225	10
2	\$238	2	114	110	101	96	6
2	\$416	3	63	59	59	526	31
2	\$226	3	127	131	108	25	3
2	\$796	5	179	130	194	3,630	79
2	\$470	2	35	32	42	1,631	79
2	\$623	4	89	94	75	275	10
2	\$405	1	15	14	13	1,216	49
2	\$332	3	225	185	187	4,886	51
2	\$11,267	44	64	64	57	239	48
2	\$414	2	44	33	72	1,729	46
2	\$362	2	230	265	190	225	35



2	\$56,087	182	2	2	2	1,428	50
2	\$343	4	1	1	1	1,345	49
2	\$86	1	85	90	68	105	6
2	\$1,690	9	40	38	53	727	45
1	\$32,507	108	74	58	85	785	65
1	\$60,772	205	5	4	4	1,249	46
1	\$52,283	193	21	21	24	1,717	56
1	\$328	4	203	209	136	95	44
1	\$17,764	86	29	27	32	4,352	79
1	\$43,354	135	176	143	166	57	5
1	\$17,388	74	136	126	130	1,115	64
1	\$9,841	36	137	120	140	1,215	32
1	\$2,144	15	215	180	181	70	7
1	\$8,232	50	117	117	103	242	45
1	\$3,680	9	195	182	154	173	9
1	\$14,824	45	133	119	133	714	12
1	\$1,665	9	185	161	163	292	65
1	\$4,911	30	134	121	134	104	8
1	\$2,728	19	169	175	126	97	8
1	\$5,662	26	122	112	121	321	65
1	\$4,266	29	152	133	144	78	7
1	\$405	5	80	71	77	612	77
1	\$1,528	14	205	175	173	38	4
1	\$1,496	5	168	146	151	293	5
1	\$174	2	76	85	63	617	56
1	\$651	6	228	199	177	21	3
1	\$621	3	75	66	79	374	46
1	\$536	5	125	113	123	1,710	79
1	\$54,885	221	30	26	36	1,027	54
1	\$259	2	26	19	34	1,439	49
1	\$3,461	15	169	133	169	314	11
1	\$8,535	52	90	86	82	654	38
1	\$1,760	15	20	25	18	1,050	79
1	\$264	3	171	179	124	138	34
1	\$676	2	129	145	101	3,199	79
1	\$4,043	30	61	62	51	252	41
1	\$0	0	233	203	178	371	16
1	\$0	0	203	194	150	2,622	100
1	\$31,822	167	65	54	72	153	9
1	\$213	1	171	171	171	83	5
1	\$15,268	64	47	42	56	1,666	45
1	\$11,564	62	59	48	60	785	65
1	\$378	2	22	22	22	708	10
1	\$823	11	204	192	154	97	31
1	\$89,790	250	10	8	12	1,221	49
1	\$3,025	6	111	104	109	1,037	42
1	\$409	2	155	138	144	189	6
1	\$0	0	170	160	144	3,321	79
1	\$12,196	76	150	136	139	131	7
1	\$883	3	149	157	118	310	35

1	\$102	1	190	158	158	452	45
1	\$2,222	16	159	150	136	231	10
1	\$10,450	30	216	183	179	13	3
1	\$29,299	152	24	23	23	2,132	56
2	\$38,101	130	5	4	5	742	48
2	\$36,522	127	8	9	8	1,580	32
2	\$108,055	225	13	12	12	1,419	27
2	\$11,842	67	23	28	17	312	9
2	\$3,652	3	59	85	40	99	34
2	\$550	3	190	157	175	17	4
2	\$4,652	23	93	96	85	127	9
2	\$25,927	84	92	81	99	426	30
2	\$11,257	57	100	102	95	210	8
2	\$14,472	68	135	118	150	253	19
2	\$1,157	5	177	170	139	196	4
2	\$86,653	235	11	10	15	1,886	22
2	\$7,083	38	190	170	158	245	42
2	\$8,059	43	132	132	132	153	10
2	\$2,056	12	173	154	153	108	31
2	\$1,193	9	25	28	25	1,782	31
2	\$1,732	8	63	48	79	8,115	49
2	\$40,495	131	32	30	35	1,362	49
2	\$2,121	15	186	168	151	472	42
2	\$537	2	14	13	14	797	32
2	\$1,569	12	219	190	172	49	5
2	\$670	5	29	33	27	543	24
2	\$991	9	200	159	185	22,333	33
2	\$798	10	103	102	106	394	35
2	\$1,518	11	204	172	176	86	7
2	\$70	2	85	99	70	80	6
2	\$1,187	6	235	200	180	1,186	21
2	\$498	5	188	162	161	72	7
2	\$557	4	120	111	126	504	49
2	\$3,600	13	204	199	148	2,025	41
2	\$159	2	49	55	38	273	9
2	\$1,036	3	246	212	180	8	1
2	\$305	5	208	172	179	9	2
2	\$0	0	11	10	15	27	4
2	\$363	2	184	155	167	242	4
2	\$1,129	2	107	112	98	124	7
2	\$194	3	56	57	60	589	20
2	\$637	5	124	133	109	37	3
2	\$608	4	154	134	122	4,089	49
2	\$182	1	34	34	43	1,804	49
2	\$708	3	92	105	75	253	9
2	\$128	2	12	15	10	1,484	31
2	\$197	3	225	181	185	5,670	27
2	\$8,196	44	58	65	51	234	31
2	\$244	2	38	32	67	1,908	29
2	\$48	1	261	224	185	251	17

2	\$83,856	173	2	2	3	1,684	22
2	\$211	2	1	1	1	1,496	31
2	\$193	1	82	95	64	146	7
2	\$1,045	7	43	38	60	704	34
1	\$30,525	98	69	60	78	804	36
1	\$71,307	214	4	5	4	1,317	34
1	\$49,576	181	21	21	24	1,863	42
1	\$200	1	203	199	147	68	25
1	\$24,989	115	28	27	33	5,457	49
1	\$16,736	73	183	150	172	73	8
1	\$18,368	74	126	122	124	1,211	18
1	\$7,777	45	128	117	134	1,294	22
1	\$3,611	27	202	173	173	54	5
1	\$7,117	41	114	117	108	218	25
1	\$7,918	13	197	176	164	176	7
1	\$8,297	40	126	123	123	766	10
1	\$2,634	16	180	157	158	269	36
1	\$7,005	42	131	121	135	123	10
1	\$3,548	17	158	167	118	102	7
1	\$4,305	32	121	120	120	342	36
1	\$5,199	31	151	139	142	107	8
1	\$607	4	71	73	69	649	47
1	\$3,351	18	213	174	175	61	6
1	\$215	2	168	149	153	367	4
1	\$273	1	76	85	66	714	42
1	\$652	5	219	193	169	15	4
1	\$1,284	5	73	69	73	419	33
1	\$952	4	203	171	176	1,926	49
1	\$59,057	233	27	26	34	1,107	28
1	\$307	4	24	20	30	964	30
1	\$3,067	13	160	135	163	370	7
1	\$8,315	42	88	94	80	688	26
1	\$4,909	22	22	25	21	1,038	49
1	\$263	4	163	178	115	131	20
1	\$0	0	128	145	101	3,362	49
1	\$6,581	38	56	63	46	237	26
1	\$332	2	226	197	173	462	13
1	\$149	3	199	193	147	2,737	86
1	\$29,491	158	60	53	67	176	10
1	\$459	3	183	159	160	110	3
1	\$14,057	63	41	42	52	1,623	26
1	\$12,277	62	54	49	63	804	36
1	\$87	1	18	22	20	1,097	48
1	\$524	6	202	189	155	103	19
1	\$93,404	270	10	8	13	1,335	31
1	\$652	6	105	106	104	1,158	28
1	\$106	1	164	149	145	250	7
1	\$0	0	161	156	133	3,705	49
1	\$14,664	67	155	138	149	113	6
1	\$0	0	202	189	117	324	19

1	\$101	1	186	165	154	419	25
1	\$2,316	15	164	151	143	95	5
1	\$9,814	25	214	170	185	14	4
1	\$34,507	163	19	24	18	2,301	42
2	\$30,077	134	6	4	6	715	55
2	\$42,663	122	9	8	9	1,430	34
2	\$99,893	222	13	11	12	1,230	43
2	\$17,146	76	25	28	18	271	7
2	\$2,200	5	60	83	40	118	32
2	\$1,412	9	189	155	168	17	2
2	\$4,121	23	93	89	87	103	7
2	\$19,534	95	92	76	98	412	82
2	\$11,944	56	103	95	99	184	8
2	\$15,603	58	138	109	146	219	11
2	\$818	5	177	165	141	184	5
2	\$94,895	205	12	10	16	1,595	36
2	\$7,224	41	192	159	168	263	51
2	\$15,017	50	137	123	124	134	9
2	\$2,717	22	178	150	160	90	37
2	\$968	5	26	27	23	1,637	37
2	\$1,121	8	67	49	80	7,312	58
2	\$55,510	145	34	30	42	1,209	58
2	\$1,423	7	186	171	149	508	37
2	\$20	1	16	12	15	673	33
2	\$2,229	14	214	185	169	44	7
2	\$760	6	31	31	24	525	30
2	\$3,236	13	198	155	178	19,199	32
2	\$798	5	104	93	105	353	48
2	\$864	6	208	166	178	76	8
2	\$491	3	88	91	71	72	7
2	\$1,843	7	221	193	168	1,012	27
2	\$1,397	12	185	160	158	71	4
2	\$423	1	129	106	132	539	58
2	\$787	7	197	188	144	1,779	54
2	\$1,176	5	45	55	37	260	12
2	\$80	1	246	206	178	10	2
2	\$644	5	195	164	167	7	2
2	\$476	2	12	10	16	29	3
2	\$195	1	186	146	177	230	5
2	\$215	2	110	105	93	126	9
2	\$449	5	57	56	51	543	27
2	\$1,494	6	132	132	109	35	4
2	\$175	2	151	137	114	3,672	57
2	\$185	1	39	36	55	1,775	59
2	\$805	5	106	99	92	197	8
2	\$32	1	14	15	11	1,260	33
2	\$624	5	219	177	178	5,207	53
2	\$8,138	41	59	66	46	218	33
2	\$333	3	46	34	77	1,625	35
2	\$107	1	253	214	178	248	26

2	\$68,170	201	2	2	3	1,473	34
2	\$505	4	1	1	1	1,212	34
2	\$441	4	79	87	63	126	4
2	\$1,266	7	43	39	57	601	52
1	\$35,444	98	69	58	78	748	53
1	\$65,549	215	5	5	5	1,238	35
1	\$41,116	180	24	21	26	1,722	46
1	\$560	4	219	193	166	77	29
1	\$31,639	120	30	26	30	4,643	59
1	\$15,792	80	190	151	175	61	4
1	\$21,569	79	130	111	128	1,197	51
1	\$15,580	55	134	107	146	1,232	30
1	\$3,783	20	204	173	171	46	5
1	\$6,704	56	127	112	122	170	29
1	\$10,748	11	196	173	158	173	9
1	\$14,047	42	125	115	115	682	15
1	\$3,264	17	178	152	157	250	53
1	\$5,419	38	139	109	148	167	6
1	\$6,068	28	167	165	128	66	4
1	\$5,020	31	121	111	110	343	53
1	\$7,425	34	151	134	139	91	7
1	\$280	3	70	72	65	538	55
1	\$2,229	12	212	170	178	46	3
1	\$371	4	172	145	157	312	8
1	\$856	3	85	79	76	707	38
1	\$434	5	208	188	160	26	4
1	\$1,060	6	75	71	76	361	35
1	\$45	1	198	169	168	1,682	59
1	\$73,424	239	29	24	32	1,107	28
1	\$1,058	4	27	19	36	1,440	34
1	\$1,283	6	159	128	162	324	8
1	\$8,408	47	100	88	102	603	36
1	\$5,623	29	19	23	23	977	65
1	\$261	3	186	174	145	156	34
1	\$76	1	131	141	104	2,908	59
1	\$11,720	51	61	64	52	230	19
1	\$450	1	206	190	157	353	13
1	\$75	2	191	189	137	2,681	82
1	\$44,788	169	63	51	72	182	10
1	\$1,163	4	184	157	160	97	4
1	\$14,051	70	38	42	45	1,515	29
1	\$12,799	59	58	49	59	748	53
1	\$460	1	23	20	25	956	65
1	\$1,314	8	193	183	146	110	31
1	\$92,143	249	11	9	13	1,237	35
1	\$550	7	109	98	105	1,017	31
1	\$85	1	170	153	143	222	10
1	\$0	0	164	153	136	3,474	67
1	\$16,120	78	154	133	146	81	3
1	\$500	1	140	138	112	331	25

1	\$70	2	181	161	154	441	30
1	\$1,644	9	169	142	155	214	9
1	\$7,625	16	209	168	178	24	6
1	\$45,504	167	22	25	19	2,126	38
2	\$38,548	129	5	4	4	931	83
2	\$35,480	114	8	8	9	1,848	52
2	\$96,694	205	13	12	11	1,604	76
2	\$20,680	83	27	29	20	331	8
2	\$494	4	64	92	40	121	24
2	\$583	6	216	171	167	30	3
2	\$5,858	29	93	94	84	157	8
2	\$23,526	96	108	78	133	559	64
2	\$10,738	72	113	99	115	202	9
2	\$13,239	64	145	118	141	334	26
2	\$1,312	4	165	178	113	247	5
2	\$87,479	202	12	10	14	2,287	68
2	\$7,863	43	198	163	165	388	69
2	\$8,262	50	141	131	120	174	9
2	\$3,161	20	183	150	164	131	59
2	\$765	7	21	28	16	2,386	68
2	\$760	6	68	50	90	10,273	101
2	\$45,891	156	34	31	35	1,691	103
2	\$2,040	12	177	179	133	772	69
2	\$719	3	15	13	17	961	54
2	\$1,771	12	219	192	160	65	7
2	\$525	3	32	32	22	674	56
2	\$1,010	11	207	162	167	27,080	37
2	\$355	4	106	90	111	568	93
2	\$562	7	222	177	167	164	47
2	\$205	1	99	98	88	99	9
2	\$409	6	201	197	141	1,464	49
2	\$1,738	9	188	171	151	106	10
2	\$437	2	149	126	145	811	103
2	\$2,061	18	196	190	138	2,601	97
2	\$293	2	54	57	49	351	15
2	\$1,464	3	256	213	167	20	3
2	\$372	2	224	180	167	9	2
2	\$901	3	12	10	14	38	5
2	\$1,292	2	200	152	167	302	5
2	\$998	6	109	110	82	160	10
2	\$457	3	50	56	45	623	49
2	\$1,457	5	143	140	114	93	64
2	\$662	3	197	150	167	5,283	101
2	\$640	2	43	37	66	2,756	102
2	\$230	1	105	109	81	264	10
2	\$754	2	14	14	13	1,667	58
2	\$1,230	5	228	183	167	7,250	99
2	\$9,200	45	58	70	43	324	54
2	\$144	1	48	38	74	2,344	56
2	\$246	2	262	218	167	358	47

2	\$56,414	198	2	2	2	2,190	68
2	\$1,188	3	1	1	1	1,784	55
2	\$221	1	81	92	63	162	7
2	\$1,165	6	51	47	65	978	66
1	\$28,389	104	71	59	72	1,059	103
1	\$64,147	215	6	5	7	1,821	58
1	\$41,291	168	26	22	33	2,404	63
1	\$7,489	8	221	196	159	140	68
1	\$30,021	119	24	24	26	5,930	103
1	\$16,318	81	209	163	167	103	10
1	\$22,121	102	124	116	113	1,636	95
1	\$10,665	51	136	113	145	1,762	69
1	\$3,550	17	227	183	167	96	18
1	\$8,842	49	123	119	110	256	57
1	\$1,526	6	193	174	153	228	9
1	\$6,560	29	136	121	113	989	65
1	\$1,853	15	190	156	164	386	128
1	\$6,419	33	151	117	161	212	9
1	\$5,192	22	181	176	138	109	5
1	\$5,525	35	35	123	28	548	128
1	\$5,578	29	154	144	129	162	10
1	\$720	5	67	74	55	768	115
1	\$2,092	11	225	181	167	75	7
1	\$650	5	181	157	156	441	16
1	\$897	3	76	80	60	964	95
1	\$1,342	5	189	193	132	43	22
1	\$1,349	6	89	76	100	575	62
1	\$45	1	223	177	167	2,429	103
1	\$94,916	221	28	25	31	1,331	61
1	\$1,056	5	31	19	48	2,065	68
1	\$2,522	15	172	135	166	430	7
1	\$10,275	44	102	96	100	888	56
1	\$5,181	28	22	26	22	1,349	103
1	\$881	4	181	182	133	230	65
1	\$681	8	120	150	77	4,051	103
1	\$9,966	53	70	66	64	257	27
1	\$401	3	218	193	159	506	17
1	\$556	3	240	196	167	2,976	99
1	\$40,012	149	74	52	105	182	15
1	\$159	1	180	168	144	135	7
1	\$18,089	70	37	43	37	2,089	56
1	\$9,048	52	55	51	54	1,059	103
1	\$976	3	23	23	27	1,305	103
1	\$773	7	214	188	160	155	49
1	\$96,315	273	11	9	12	1,812	56
1	\$1,465	9	110	105	98	1,577	70
1	\$418	3	196	169	159	269	10
1	\$78	1	174	159	145	4,824	101
1	\$23,254	75	161	139	141	104	4
1	\$1,377	5	163	141	141	474	22

1	\$133	2	37	171	162	589	55
1	\$4,274	14	175	148	158	289	8
1	\$7,665	22	224	179	167	33	5
1	\$46,428	181	18	27	15	2,914	71
2	\$29,515	114	4	4	4	1,156	96
2	\$38,194	105	8	7	7	2,172	60
2	\$126,447	238	11	11	11	1,843	96
2	\$17,171	79	26	28	19	455	12
2	\$556	4	60	90	35	141	24
2	\$83	1	214	175	190	29	3
2	\$5,871	22	102	92	98	164	8
2	\$25,502	109	87	78	100	686	86
2	\$12,606	57	101	94	96	294	9
2	\$11,739	60	155	116	164	362	35
2	\$2,070	9	197	181	162	254	6
2	\$86,309	233	13	8	14	2,550	81
2	\$5,117	33	180	163	165	474	105
2	\$13,218	59	157	137	146	213	15
2	\$3,971	24	186	151	172	167	65
2	\$1,109	7	27	26	27	2,664	81
2	\$1,433	9	61	52	77	11,917	135
2	\$51,263	148	33	29	34	2,208	138
2	\$2,089	11	219	219	184	914	105
2	\$1,281	6	15	12	15	1,088	67
2	\$804	10	215	190	176	166	61
2	\$610	3	30	30	23	839	85
2	\$1,243	9	215	167	195	30,463	46
2	\$1,128	7	104	84	114	749	126
2	\$1,405	7	177	177	149	184	53
2	\$137	3	94	96	83	143	14
2	\$379	4	219	199	168	1,691	91
2	\$1,263	9	185	167	162	129	15
2	\$1,213	6	151	126	146	936	138
2	\$1,064	9	194	191	145	3,021	133
2	\$464	3	48	58	41	385	10
2	\$274	2	237	216	172	21	2
2	\$399	4	245	187	188	11	2
2	\$346	1	13	8	14	46	3
2	\$117	2	184	148	179	391	6
2	\$350	2	107	109	95	186	8
2	\$323	4	40	56	49	716	83
2	\$1,459	7	137	140	131	166	105
2	\$300	2	195	151	183	6,144	137
2	\$508	2	35	34	38	3,207	138
2	\$170	1	112	109	93	313	11
2	\$469	2	14	13	13	1,894	66
2	\$1,044	7	227	185	194	8,887	125
2	\$12,127	53	68	70	56	407	59
2	\$271	2	46	35	74	2,561	86
2	\$85	3	259	214	194	442	7



2	\$70,578	200	2	2	3	2,729	81
2	\$2,369	4	1	1	1	2,269	62
2	\$373	4	81	91	66	217	9
2	\$2,137	13	58	42	89	1,131	97
1	\$30,466	107	71	60	75	1,216	138
1	\$60,960	195	6	6	5	2,008	100
1	\$39,481	125	22	23	25	2,953	117
1	\$426	3	217	186	176	141	81
1	\$29,332	118	24	21	29	7,123	138
1	\$16,122	84	172	172	132	118	9
1	\$26,046	112	124	111	126	1,917	136
1	\$15,196	43	121	107	136	2,055	105
1	\$7,606	21	209	182	175	81	14
1	\$8,221	41	132	120	130	295	61
1	\$5,163	4	174	171	137	226	11
1	\$9,628	35	145	114	148	1,185	72
1	\$1,381	8	197	154	184	473	138
1	\$6,894	39	129	113	133	234	12
1	\$7,506	31	176	170	157	129	9
1	\$4,842	34	115	117	110	646	138
1	\$7,488	39	156	142	135	174	18
1	\$510	2	75	71	70	887	128
1	\$1,488	10	205	175	171	97	11
1	\$1,082	6	177	157	173	466	13
1	\$444	5	81	75	82	1,098	105
1	\$1,935	9	226	194	179	52	25
1	\$1,262	5	89	73	97	707	86
1	\$452	3	206	182	170	2,712	138
1	\$109,015	245	28	22	36	1,577	77
1	\$628	4	29	18	42	2,330	81
1	\$3,631	17	146	131	152	456	8
1	\$10,894	53	96	93	87	964	91
1	\$4,220	23	20	24	21	1,654	138
1	\$43	1	178	181	138	250	93
1	\$825	4	130	154	97	4,786	138
1	\$6,309	43	72	64	69	358	46
1	\$240	1	223	194	176	583	12
1	\$493	2	211	202	154	3,261	105
1	\$42,617	155	62	49	79	220	13
1	\$159	1	202	171	171	178	7
1	\$15,891	61	50	41	63	2,478	66
1	\$7,729	41	55	50	55	1,216	138
1	\$540	2	21	19	28	1,558	138
1	\$1,026	6	212	189	167	184	83
1	\$67,117	223	10	9	12	2,004	67
1	\$352	3	106	98	98	1,926	105
1	\$123	1	198	170	171	312	8
1	\$0	0	190	162	166	5,782	138
1	\$24,260	74	159	135	150	144	6
1	\$709	4	147	134	135	578	38

1	\$206	1	182	168	171	687	59
1	\$3,363	11	138	148	134	333	8
1	\$12,742	23	219	183	182	45	12
1	\$45,071	169	23	25	22	3,250	105
2	\$38,064	118	4	4	6	1,439	210
2	\$36,854	102	9	8	9	2,601	105
2	\$106,700	212	11	12	11	2,369	210
2	\$19,547	84	31	31	19	508	9
2	\$434	3	45	90	5	211	84
2	\$301	4	210	163	181	50	4
2	\$6,073	25	91	91	90	188	7
2	\$24,919	96	84	77	79	754	125
2	\$11,384	54	105	92	92	355	12
2	\$12,584	59	171	116	157	421	45
2	\$323	2	185	174	130	292	8
2	\$78,748	215	12	9	18	2,807	105
2	\$8,492	35	159	154	133	543	127
2	\$13,085	55	168	140	135	263	14
2	\$4,258	19	184	149	163	228	106
2	\$1,753	7	26	29	21	3,193	106
2	\$1,816	8	62	53	80	13,423	208
2	\$55,633	137	33	32	34	2,438	215
2	\$762	5	244	180	186	1,124	140
2	\$785	5	13	13	21	1,290	101
2	\$2,503	10	240	183	169	212	118
2	\$130	2	34	33	20	911	126
2	\$1,368	8	199	151	190	33,867	68
2	\$1,335	6	91	78	116	876	214
2	\$512	4	197	170	138	227	79
2	\$71	1	109	98	69	146	15
2	\$1,126	8	219	187	154	1,944	122
2	\$5,304	9	190	157	151	184	19
2	\$1,555	6	139	128	112	1,156	215
2	\$5,577	16	192	181	128	3,532	205
2	\$493	3	57	56	36	440	18
2	\$1,887	6	243	206	162	30	4
2	\$115	1	253	179	192	21	3
2	\$447	1	12	9	18	54	3
2	\$553	5	190	142	178	447	7
2	\$1,387	8	113	108	82	198	16
2	\$82	2	60	58	47	888	118
2	\$836	6	143	135	106	242	181
2	\$356	2	198	146	171	7,150	215
2	\$0	0	37	36	32	3,675	215
2	\$0	0	95	111	53	323	11
2	\$500	1	15	15	14	2,297	101
2	\$1,610	9	229	172	191	10,686	202
2	\$9,089	55	63	71	46	502	101
2	\$22	2	38	37	71	3,161	125
2	\$50	1	270	198	192	453	7

2	\$54,463	171	1	1	4	3,017	105
2	\$984	5	2	2	2	2,507	101
2	\$521	4	92	92	53	250	8
2	\$1,451	8	41	43	63	1,086	122
1	\$31,108	106	68	63	74	1,399	215
1	\$58,362	199	7	6	10	2,439	126
1	\$46,857	153	27	26	28	3,402	213
1	\$115	3	218	174	155	196	105
1	\$32,169	119	20	20	30	8,170	215
1	\$19,859	91	149	165	108	111	9
1	\$36,141	116	123	174	125	2,293	209
1	\$12,832	52	123	104	119	2,416	128
1	\$10,217	13	214	169	163	100	7
1	\$5,397	35	137	117	120	332	99
1	\$4,671	4	153	155	90	281	12
1	\$5,891	33	132	114	134	1,324	109
1	\$2,607	11	205	147	180	605	215
1	\$10,361	26	114	112	110	278	12
1	\$3,403	20	176	157	126	141	5
1	\$4,610	29	116	120	94	787	215
1	\$6,469	35	143	134	117	171	12
1	\$351	2	80	73	61	983	196
1	\$1,804	14	201	163	152	91	8
1	\$1,307	6	198	147	174	576	12
1	\$269	3	75	78	62	1,309	140
1	\$1,108	9	231	181	170	49	10
1	\$1,027	5	82	74	81	817	126
1	\$235	3	216	176	160	3,116	215
1	\$135,052	206	27	24	35	1,675	118
1	\$1,338	6	25	22	60	2,612	105
1	\$2,289	11	177	130	167	481	10
1	\$22,257	71	102	92	77	1,268	139
1	\$4,638	22	28	27	22	1,717	215
1	\$209	2	178	168	100	315	125
1	\$2,030	6	123	142	50	5,273	215
1	\$6,676	38	76	68	72	389	71
1	\$500	1	232	178	175	700	33
1	\$1,815	3	228	200	138	3,770	140
1	\$46,499	155	12	50	86	304	89
1	\$292	3	193	167	150	171	5
1	\$16,818	70	47	44	73	2,803	103
1	\$9,171	42	55	52	57	1,401	215
1	\$3,393	6	24	21	33	1,807	215
1	\$1,721	8	212	181	148	242	118
1	\$102,164	224	8	10	13	2,311	103
1	\$340	2	99	93	84	2,244	127
1	\$437	3	204	164	150	366	16
1	\$366	1	199	155	161	6,657	213
1	\$20,044	83	154	126	130	199	9
1	\$509	7	155	132	119	706	56

1	\$178	1	185	155	154	830	99
1	\$5,008	17	159	142	115	370	10
1	\$14,972	28	236	183	177	70	26
1	\$33,655	163	30	28	33	3,792	140
2	\$35,846	81	5	5	6	1,365	159
2	\$60,078	74	8	9	9	2,580	84
2	\$83,732	121	13	14	12	2,246	158
2	\$19,728	50	29	30	23	525	9
2	\$1,250	6	44	66	8	119	10
2	\$331	4	243	194	191	40	5
2	\$6,057	16	96	98	97	184	6
2	\$32,357	55	93	92	90	682	94
2	\$9,963	32	105	105	91	255	13
2	\$11,633	37	166	132	163	394	30
2	\$519	1	224	209	148	244	8
2	\$86,389	131	10	10	17	2,797	85
2	\$4,882	23	183	183	135	534	106
2	\$11,577	40	186	164	152	248	22
2	\$2,415	15	197	158	187	181	72
2	\$1,638	9	26	29	20	2,892	84
2	\$2,814	4	64	52	95	13,023	160
2	\$48,625	77	26	23	42	2,395	161
2	\$1,234	5	227	184	182	1,168	106
2	\$507	3	15	13	22	1,191	76
2	\$1,028	7	233	194	171	158	92
2	\$1,059	5	33	31	26	881	96
2	\$1,211	7	226	178	197	32,046	62
2	\$1,074	7	98	84	126	783	154
2	\$996	3	212	203	139	206	52
2	\$412	4	102	102	78	133	10
2	\$562	4	228	204	156	1,830	96
2	\$948	5	178	155	145	156	9
2	\$302	2	143	147	99	1,074	158
2	\$2,744	9	200	176	157	3,224	155
2	\$0	0	57	59	45	430	15
2	\$6,809	6	245	230	146	17	2
2	\$1,279	3	281	201	211	17	5
2	\$0	0	10	10	17	36	3
2	\$1,052	6	193	152	180	432	8
2	\$2,618	2	112	107	103	183	12
2	\$36	1	65	63	59	907	91
2	\$984	4	139	142	117	208	132
2	\$440	4	207	169	148	7,012	159
2	\$1,347	2	37	35	39	3,434	161
2	\$52	0	117	137	65	312	12
2	\$125	1	16	16	18	2,166	77
2	\$1,432	8	235	173	200	10,280	114
2	\$12,168	33	71	78	68	474	73
2	\$364	2	46	38	83	2,947	94
2	\$377	3	219	164	186	427	6

2	\$75,690	101	4	3	5	2,994	85
2	\$206	2	1	1	1	2,383	73
2	\$40	1	91	94	70	236	7
2	\$1,841	8	48	47	36	1,115	92
1	\$24,958	77	78	70	96	1,373	158
1	\$56,400	118	9	8	11	2,229	106
1	\$35,399	72	25	24	41	3,122	158
1	\$706	3	218	175	179	142	83
1	\$39,223	84	22	20	35	7,815	159
1	\$33,652	56	197	181	144	139	7
1	\$53,599	100	121	112	121	2,148	157
1	\$17,006	40	114	110	104	2,640	105
1	\$4,850	8	223	191	166	93	10
1	\$4,884	24	145	138	126	356	73
1	\$1,845	6	164	168	110	276	10
1	\$6,846	17	136	124	137	1,211	29
1	\$2,892	12	201	160	183	625	158
1	\$5,211	20	130	133	112	261	12
1	\$6,002	27	200	177	153	133	6
1	\$6,689	26	135	128	121	775	158
1	\$8,451	29	150	144	118	186	9
1	\$614	4	77	73	78	923	155
1	\$1,717	8	236	184	185	89	9
1	\$480	2	203	169	175	554	10
1	\$743	2	81	169	67	1,251	106
1	\$1,055	5	278	205	210	55	15
1	\$1,702	4	85	81	90	753	96
1	\$311	1	264	204	200	3,167	158
1	\$123,961	162	31	27	40	1,570	85
1	\$549	3	27	22	60	2,592	84
1	\$3,255	12	165	135	159	453	8
1	\$35,483	55	110	109	88	1,291	105
1	\$5,417	22	23	26	27	1,646	157
1	\$680	2	172	169	120	300	93
1	\$293	1	123	127	81	5,256	161
1	\$6,548	21	76	72	87	372	49
1	\$400	1	254	199	193	729	36
1	\$972	3	205	210	117	3,870	106
1	\$49,294	112	68	61	85	288	108
1	\$1,108	2	241	196	185	163	7
1	\$17,306	49	53	44	74	2,626	71
1	\$8,867	27	58	51	79	1,373	158
1	\$1,991	4	24	23	39	1,783	161
1	\$705	4	220	182	173	206	92
1	\$68,346	120	12	11	14	2,087	76
1	\$181	1	103	103	79	2,196	106
1	\$287	4	218	193	152	331	11
1	\$50	0	194	173	150	6,205	160
1	\$13,855	58	157	155	124	211	10
1	\$4,099	12	156	143	132	708	44
1	\$277	1	197	161	177	751	70
1	\$2,316	10	163	158	125	363	15
1	\$4,614	11	261	229	168	60	17
1	\$52,052	102	28	28	39	3,908	106

Table 11: Total NSF Data

## N) References

### a) Bibliography

- 1) Carnegie Classification of Institutions of Higher Education (n.d.). Retrieved July 30<sup>th</sup>, 2020 from [https://en.wikipedia.org/wiki/Carnegie\\_Classification\\_of\\_Institutions\\_of\\_Higher\\_Education](https://en.wikipedia.org/wiki/Carnegie_Classification_of_Institutions_of_Higher_Education)
- 2) Higher Education Research and Development Survey (HERD), (n.d.). Retrieved July 17<sup>th</sup>, 2020 from <https://www.nsf.gov/statistics/srvyherd/>
- 3) Howard Hughes Medical Institute (n.d.). Retrieved August 27<sup>th</sup>, 2010 from <https://www.hhmi.org/>
- 4) James S. McDonnell Foundation (n.d.). Retrieved August 27<sup>th</sup>, 2010 from <https://www.jsmf.org/>
- 5) Law Insider – Definition of Public Institutions. (n.d.). Retrieved July 14<sup>th</sup>, 2020, from <https://www.lawinsider.com/dictionary/public-institutions>
- 6) Layzell, D.T. Linking Performance to Funding Outcomes at the State Level for Public Institutions of Higher Education: Past, Present, and Future (1999). *Research in Higher Education* 40, 233–246. Retrieved August 10<sup>th</sup>, 2020 from <https://link.springer.com/article/10.1023/A:1018790815103>
- 7) List of Research Universities in the United States (n.d.). Retrieved July 30<sup>th</sup>, 2020 from [https://en.wikipedia.org/wiki/List\\_of\\_research\\_universities\\_in\\_the\\_United\\_States](https://en.wikipedia.org/wiki/List_of_research_universities_in_the_United_States)

- 8) NCES. Public and Private Schools – how do they differ? Findings from the condition of education (1997). Retrieved August 25<sup>th</sup>, 2020 from <https://nces.ed.gov/pubs97/97983.pdf>
- 9) National Science Foundation - Where Discoveries Begin. (n.d.). Retrieved July 27, 2020, from <https://www.nsf.gov/about/>
- 10) National Science Foundation – Funding & Supporting. (n.d.). Retrieved July 24, 2020, from <https://www.nsf.gov/>
- 11) National Science Foundation – Funding & Supporting – Where it goes. (n.d.). Retrieved July 25<sup>th</sup>, 2020 from <https://www.nsf.gov/homepagefundingandsupport.jsp#where-it-goes>
- 12) National Science Foundation – Funding Opportunities. Retrieved July 25<sup>th</sup>, 2020 from <https://www.nsf.gov/funding/azindex.jsp>
- 13) NSF Budget Internet Information (n.d.). Retrieved July 15<sup>th</sup>, 2020 from <https://dellweb.bfa.nsf.gov/starth.asp>
- 14) NSF HERD Survey Fiscal Year 2012 (n.d.). Retrieved July 20<sup>th</sup>, 2020 from <https://ncesdata.nsf.gov/herd/2012/>
- 15) Private institution. (2020, June 23). Retrieved July 16<sup>th</sup>, 2020, from <http://uis.unesco.org/en/glossary-term/private-institution>
- 16) Private Institutions. NSF HERD Survey Data (n.d.). Retrieved July 20<sup>th</sup>, 2020 from [https://ncesdata.nsf.gov/herd/2012/html/HERD2012\\_DST\\_35.html](https://ncesdata.nsf.gov/herd/2012/html/HERD2012_DST_35.html)
- 17) Public and Private Institutions. (n.d.). Retrieved July 15<sup>th</sup>, 2020, from [https://epigeum.com/downloads/ulm\\_accessible/uk/06\\_resources/html/course\\_files/mr\\_3\\_20.html](https://epigeum.com/downloads/ulm_accessible/uk/06_resources/html/course_files/mr_3_20.html)
- 18) Public Institutions. NSF HERD Survey Data (n.d.). Retrieved July 20<sup>th</sup> from [https://ncesdata.nsf.gov/herd/2012/html/HERD2012\\_DST\\_34.html](https://ncesdata.nsf.gov/herd/2012/html/HERD2012_DST_34.html)

- 19) Random Number Generator (n.d.). retrieved July 15<sup>th</sup>, 2020 from <http://www.randomnumbergenerator.com/>
- 20) Rousea W, Lombardib J, Craigr D. (2018). Modeling research universities: Predicting probable futures of public vs. private and large vs. small research universities. *PNAS*. Retrieved August 30<sup>th</sup>, 2020 from <https://www.pnas.org/content/pnas/115/50/12582.full.pdf>
- 21) Scimago Institutions Rankings Methodology (n.d.). Retrieved July 25<sup>th</sup>, 2020 from <https://www.scimagoir.com/methodology.php>
- 22) Sizer, J., Spee, A., and Bormans, R. (1992). The role of performance indicators in higher education. *Higher Education* 24(2): 133±156. Retrieved August 28<sup>th</sup>, 2020.
- 23) The State of U.S. Science and Engineering 2020 (January 2020). Retrieved July 30<sup>th</sup>, 2020 from <https://nces.nsf.gov/indicators>
- 24) Why choose Scopus (n.d.)? Retrieved July 30<sup>th</sup>, 2020 from <https://www.elsevier.com/solutions/scopus/why-choose-scopus>
- 25) What is Scopus Preview (n.d.)? Retrieved July 30<sup>th</sup>, 2020 from [https://service.elsevier.com/app/answers/detail/a\\_id/15534/supporthub/scopus/#tips](https://service.elsevier.com/app/answers/detail/a_id/15534/supporthub/scopus/#tips)



# Lauren Elizabeth Horne

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## Objectives

To contribute my growing knowledge and skills as an Administrative Assistant of the Roskamp Institute and expand my skill-set to reach additional opportunities to provide aid and treatment to those affected by neurodegenerative diseases.

## Education

### Johns Hopkins University

#### Master of Science in Research Administration

Online, Bradenton FL

Expected Degree by Fall 2020

### Saint Leo University Saint Leo, Dade City, FL

Bachelor of Science, *Biology*

2012-2015

*Minor: Chemistry*

- Florida Bright Futures Scholarship 2010-2014
- Member of Tri Beta Biological Honor Society 2012
- Saint Leo University Merit Scholarship 2012-2015
- Sarasota Council of the Blind (3 \$1,000 scholarships) 2013-2015

### State College of Florida

2010-2012

Associates Degree

- Florida Bright Futures Scholarship 2010-2012

- Member of Phi Theta Kappa 2011-2012
- 2011 Genevieve and Granger Husted Scholarship September 2011
- SCF Spring 2011 Semester President's List June 1<sup>st</sup>, 2011
- Visual Aid Volunteers of Florida, Inc (\$2,000 scholarship) 2010

## Employment Experience

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### **The Roskamp Institute, Inc**

**Sarasota, FL**

*Administrative Assistant/PhD Programme Assistant*

06/2018-Present

- *Experience in interactions with prospective, current, and previous PhD students with the Open University in the United Kingdom; staff members & administrative personnel with The Roskamp Institute, Inc., and the Open University, to ensure paperwork is completed correctly, files and documents are maintained throughout the programme per student, and the students receive all the appropriate support from both the institute and the Open University.*

### **Grant Coordinator**

09/2015-06/2019

- Experience in interactions with investigators and administrative staff to ensure grants are in compliance with regulatory, funding agency, and policy requirements.
- Coordination of planning and preparation of grant proposals
- Provide guidance and assistance to investigators in interpreting funding agency regulations and requirements
- Maintained knowledge of current grant funding policies, regulations, and procedures
- Proper organization and management of working database of electronic grant files and related documentation
- Ability to make administrative decisions and judgements
- Knowledge of grant funding policies and procedures and applicable local, state, federal and university regulations.
- Knowledge of budgeting and fiscal management principles and procedures

- Conducted daily administrative duties (communications, organization, telephone, data management, etc)

## Internship Experience

**The Roskamp Institute, Inc Sarasota, FL**

***Laboratory Assistant Volunteer***

05/2012-08/2015

- Exposure to and proficient in numerous laboratory projects, including genetic engineering, advanced genetic processes, neuro-behavior, and neuropathology
- Skilled in numerous laboratory techniques, including but not limited to Polymerase Chain Reaction (PCR), Gel Electrophoresis, and Cell Culture

## PUBLICATIONS

- Zakirova Z, Crynen G, Hassan S, Abdullah L, Horne L, Mathura V, Crawford F, Ait-Ghezala G (2016). A Chronic Longitudinal Characterization of Neurobehavioral and Neuropathological Cognitive Impairment in a Mouse Model of Gulf War Agent Exposure. *Front Integr Neurosci.* 12;9:71.
- Zakirova Z, Reed K, Crynen G, Horne L, Hassan S, Mathura M, Crawford F, Ait-Ghezala G (2017). Complementary proteomic approaches reveal mitochondrial dysfunction, immune and inflammatory dysregulation in a mouse model of Gulf War Illness. *Proteomics Clin Appl.* 11(9-10):1600190.

## COMMITTEES

- 
- |  |                 |
|--|-----------------|
| • Lab Coordinator Committee                          | 09/2015-02/2016 |
| • Roskamp Institute Brain Waves Newsletter Committee | 10/2015-2018    |

## SKILLS

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- Effective communication, both orally and in writing
  - Proficient in the use of Adobe and Microsoft Office, more specifically Word, Excel, & Outlook